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ORIGINAL ARTICLES.

SURGERY OF TUBAL PREGNANCY.

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As we look back across the years we note that progress in some of the more important lines of medicine and surgery has not been rapid, that many of the simplest surgical procedures, those of inestimable value to the profession and to suffering patients, have been of comparatively recent devisement and practice. The steps are slow that grafts most that is best into our every science and art. We put to the severest tests of science and experience every product or result of the highest genius. We are not satisfied until we have tested and know values. But for all this our advances are not the less certain and reliable. Every innovation must confront prejudices, opposing arguments, stand the tests of many experiences, before it can be regarded as having come to stay. We prefer our roads should be made for us and be well traveled before we take to them. We throw ourselves upon the resources of our science and art as we find them and find that to master them is the best equipment for our work. We are averse to wasting time in the discovery or invention of new methods. We are rather impatient with the "my method" gentlemen of the profession. In making choice of a watch we prefer the Geneva to the Waterbury. In surgery our choice of methods is equally easy, the guiding is that of a principle equally rational—it is to prefer the simple, direct, accurate and successful in re-

sult, the method employing a minimum of manipulation.

We are not so eager for the invention of something new as we are for the wisdom to use what we have at hand, to so improve and adapt our methods to our varied needs as to carry order where confusion now exists. Do not understand, that we object to the new, to innovations; we would not fix a limit to our resources. We want investigation, research and invention to have free wing, but we can only gain more and better by using wisely and energetically what we have. We want enough interest in the "ways and means" at our command to take all professional drowsiness out of us. It is as a means to something better that we believe in the old. The old is good only as it can be used to evolve something better. We have no sympathy with modern conservatism as exhibited in medicine and surgery. It is the spirit of delay, of postponement, and regards all changes as deterioration. It conserves the old because it is old—because that is the way the old Beacon street or Knickerbocker dad did it. It never has a new day—spends all its time living over yesterdays. We are not feeding on old reputations, resting by old landmarks, we would mark some growths of our own. I desire for the profession of the period some triumphs. From an operative standpoint I consider the success of surgical interference in tubal pregnancy as one of the most prominent innovations marking the progress of modern surgery.

*Read before Western Association Obstetricians and Gynecologists, 1892.

Early in the history of all surgery it is difficult to establish a procedure—perfecting the surgery of any particular operation is easy and simple, as compared with the educational effort needed to establish it. As yet some procedures or operations largely practiced by eminently successful operators are questioned by the so-called conservatives.

I would urge the opinion that tubal pregnancy is a grave, perilous trouble from the very instant of its inception, and from the instant of its first recognition there should be no suspension of the vigil over it. These cases burden every physician into whose hands they fall with untold anxieties and doubts. Consultations for suspected intra-uterine pregnancy are quite common in those peculiar cases of much-attenuated uterine walls in normal gestation, but the ectopic cases are permitted to pass through the primary rupture, recurring ruptures, almost constant pain and spurious labor, entailing impaired general health, without even a suspicion of the patient's peril. Some ten cases in my own experience have had this history. Tubal pregnancy is dangerous throughout its existence. The subject is never safe until surgically relieved, and the time for this relief is when the trouble is first recognized.

Exceptionally—if ever, is the trouble recognized before rupture. The few cases recorded have all been by men with one experience, with very little knowledge of the murderous troubles found in the pelvis. A few surgeons, with an experience of nearly one hundred sections for ruptured tubal pregnancy, have never found one unruptured. Dr. Berry Hart, who has given the subject very patient and studied investigation and who discusses it from a high surgical standpoint, is worth quoting here: "As all know, the Fallopian tube is in the vast majority of instances the starting point of extra-uterine gestation; the most common result of this is that rupture occurs, usually at the second month, through some part of the tube covered by peritoneum, a result almost universally fatal if left alone, and as invariably curable if operated on in time by abdominal section." An element of the history connected with these cases is that few of them are kept under observation with the definite purpose of removing the viable child at the

period of spurious labor—but few are recognized at that time; alarming symptoms develop and subside, and consultation with a specialist, if he is at any time consulted, follows the death of the child, it rarely antedates it. Then all the conditions are found greatly aggravated by delay or neglect, or that which is infinitely worse, than either or both, inexcusable ignorance. The occurrence of ectopic pregnancy is regarded in widely different lights by the theorist, and by the surgeon who has learned to deal with it practically and who has accordingly come to understand the manifold directions in which speedy disaster may troop down upon unfortunate women subjected to this calamity. The argument that many cases get well of themselves, in the presence of the multitude of disasters and in the light of the horror of some of these very recoveries, is so puerile that the surgeon of practical and positive bent cannot regard them with complacency, nor consider that those who advance them have authority from which to speak more positive than the vaporings of fancy.

To explain the reasons for this apparently rather rude statement the following *causes of death* maybe enumerated:

Hemorrhage, Peritonitis, Septicæmia, Perforation of important viscera by bone.

For rupture of the sac in the early stages little or nothing was done till recent times. Baneham, of Virginia, did two operations, one 1790 and the other 1799, both successful. There was a lapse of one half-century before the procedure.

In 1849, Dr. Harbert, an American surgeon, first suggested operative treatment for this terrible accident; but little attention was paid to his proposal till 1866 and 1867, when Dr. Stephen Rogers, of New York, wrote and urged operation. No headway was made, however, until Tait, in recent years, took it up and by a remarkable series of successes placed it at the front of major life-saving procedures.

I can only allude briefly in discussing this subject to the more important points still under discussion; those not yet settled to the satisfaction of many by the logic of experience and result. I am convinced by my own surgical experience that ectopic pregnancies are always tubal—that they rupture and end in some variety of intra-peritoneal mischief. The embryo

escapes at the first rupture and is either found or lost by digestion. Recurring hæmorrhages are common; the placenta and its traces are irremovable. I have removed a large number of fetuses, from eight to ten weeks old, dead, macerated, and largely digested, with a well-developed placenta living and growing, the growing going on long after the death of the fetus. Mr. Tait alludes to over eighty cases of intra-peritoneal hæmatocele, and in every one of them the cause was ruptured tubal pregnancy. With an experience of eighty-three sections for ectopic pregnancy I remain in surgical ignorance of extra-peritoneal hæmatocele, not a single case did I encounter. Speaking purely from my own experience I am driven to say that there is no such a thing as a pelvic hæmatocele, except those produced by ruptured tubal pregnancy. I may be classed as an enthusiast for operation, but I always find large quantities of blood and clot in the peritoneal cavity and commonly a fetus. The answer as to the proper time for surgical interference is, when you are sure rupture has taken place and hemorrhage is going on; when the symptoms are sufficiently marked and positive to justify the specialist or general practitioner in opening the abdomen for relief from such a calamity. The diagnosis should not be uncertain; the physician should be familiar with the characteristic symptoms; if not familiar he will be impressed by their precise nature, so rare is it that he has an opportunity of contending with such marked symptoms. They may be summarized as—history of pregnancy; one or more periods absent; agonizing pain; patient becomes faint and blanched, and manifests peculiar mental disturbance; symptoms of concealed hæmorrhage, and common sense would suggest at once the staying of the hæmorrhage by seeking the offending vessel. Taking time to consider the case in all its varied aspects, waiting on later developments, commonly results in needless delay and loss of the patient. Precise diagnosis is not important in the presence of a pelvic or abdominal tumor behaving badly and destroying your patient. I insist upon primary operation in all cases. The dangers of non-interference, primary and secondary, are too great and well-known for us to withhold our hands. Recurring hæmorrhages, sepsis, peritonitis and ex-

haustion do occur in all cases of delay.

Probably the most puzzling and difficult question to settle, where interference is required, is that of dealing with the placenta. When detached, or easily detachable without much hemorrhage, it should be removed. This has been done frequently with success, yet cases have been lost through attempts to peel off the placenta. There are yet other methods of procedure—one to leave the placenta and drain the sac; another to cut off the cord, leave the placenta and close the sac. Hemorrhage may occur in either procedure, and also when the placenta is not removed. In all cases the risks of bleeding are considerable. Hemorrhage though has been rendered less alarming and fatal by our better methods of suppressing it—firm sponge or gauze packs, the use of heat or solution of iron. I will add here that iron will favor fecal fistula and tedious convalescence. Ligatures and forceps cannot be used about viscera with safety, drainage with pressure will be the safest and surest. I am constrained to conclude from my own clinical experience that the old and non-surgical rule of leaving the placenta to slough away is too dangerous and prolonged to be practiced. The placenta should be removed in every case, or washed and hermetically sealed, thus favoring its healthy digestion and avoiding gangrenous suppuration and detachment.

Good surgery must settle the few remaining points. Secondary rupture of broad ligament, discharge of placenta and fresh adhesions, or the second implantation or grafting of the placenta, have never occurred in my experience; nor have I any knowledge of such cases except that conveyed through the literature of the subject, where they appear in large numbers. In the matter of methods, such cases are not of the kind in which you can indulge in indecision; they will brook no delay in your determining what to do and how you will do it. If there be present a bulky placenta, living and growing, either before or after the death of the fetus, the choice of one of two methods must be made and practiced with rapidity and courage—cleansing and hermetically sealing the placenta and abdomen, trusting to absorption, or secondary operation for its removal in the event of its behaving badly. The removal of a growing and

about universally attached placenta is one of the most startling and difficult procedures in surgery; it taxes the highest courage. The hemorrhage is profuse and alarming, and sometimes uncontrollable; the contraction of all tissues to which it is attached simulates very much that of uterine tissue. Rapid separation, heat and firm pressure will commonly succeed in controlling it. As to the choice of time for operation, after a careful study of the history, surgical procedure and results in the recorded cases, united with my own experience, I am strong in the conviction that there is but one safe choice, and that is prompt removal when the accident is first recognized. Delays at any period of ectopic pregnancy are dangerous.

I scarcely think it is wise to risk the mother's life for a living child by waiting for viability. Here comes in a very important question—one upon which there is a wide difference of opinion. From the standpoint from which I view the matter, the mother's life should be paramount, the child's a secondary consideration. I will not assume to discuss the question from an ethical standpoint, but confine myself to cold surgery and to results—to the matter as it relates to the mother personally and involves her relations to her family and to society. Happy, if preserved life be the fortune of both, but if there must be a loss and a saving of one I would have the saving that of the mother's.

Whatever the verdict may be ultimately as to the time of operating, the method and site for incision seem to be fixed. The method of evacuating the liquor amnii has been followed by such doubtful and calamitous results that it is now practically abandoned. The vaginal method of extirpation of the sac is also now almost universally condemned and can only be thought of in the rarest possible conditions. I can do no better than to quote Dr. Herman's conclusions, which are as follows:

1. The operation of opening an extra-uterine gestation sac by the vagina early in pregnancy, before rupture has taken place, by the cautery, knife or otherwise, is a dangerous and unscientific procedure. Abdominal section ought always to be preferred to this.

2. Soon after rupture has taken place, when interference is called for to arrest

hemorrhage, abdominal section is more liable to succeed than vaginal.

3. When rupture has taken place, and the effusion of blood is followed by pyrexia, the indications for incision of vagina are the same as those in hematocele from any other cause.

4. At, or soon after full term, before suppuration has taken place, there may be conditions which indicate delivery by the vagina as preferable to abdominal section.

These are—

5. When the fetus is presenting with the head, breech, or feet so that it can be extracted without altering its condition.

6. When it is quite certain, from the thinness of the structures separating the presenting part from the vaginal canal, that the placenta is not implanted on this side of the sac, and it is not certain that the placenta is not implanted on the anterior abdominal wall.

7. If the child cannot be delivered by the vagina without being turned abdominal section should be performed.

The statistics in these cases are interesting and valuable. Their chief lessons are the perils to life and the importance of prompt surgical interference. The eminence of Mr. Martin, of Berlin, gives the weight of high authority to his observations. He reported the results of his observations in 56 cases of ectopic gestation, at the recent International Congress at Brussels. We extract from a synopsis of this report published in the *American Journal of Medical Sciences*; "Most cases of ectopic pregnancy terminated in tubal abortion within the first three months. Martin's table shows that 15 terminated in the first month, 13 in the second, 11 in the third, 7 in the fourth, the remainder occurring before the ninth month. The fœtus attained viability but once in his cases. The interruption of ectopic pregnancy usually occurs from failure in the physiological conditions existing between the ovum and the cavity containing it. The pain which occurs at tubal abortion is caused by the passage of blood through the tube. The newly developed blood vessels burst, while the strongly developed muscular layer of the tube is not ruptured. Thus many cases result in spontaneous recovery. Convalescence, however, is prolonged, and there is danger of death from shock, hemorrhage, and the development of sep-

tic infection. Localized pelvic peritonitis is also common. Martin quotes Schauta's collection of 241 cases in which the ovum was not removed by operation. Of these, 128 ruptured into the abdominal cavity with bleeding; in 22, a hæmatocele formed with peritonitis. In 34, rupture occurred into the intestine; in 9, into the bladder; in 5, the abdominal wall was perforated; in 4, the vagina was entered; in 6, the ovum escaped through the uterus; in 4 cases it became incarcerated with ileus; and in 9 cases lithopædion was formed without especial annoyance to the patient. He had personally observed 5 cases in which rupture occurred, which were not treated by operation; all of them perished. The symptoms of ectopic gestation embrace some of those of normal pregnancy, early in the case, symptoms of peritoneal irritation predominate. Menstruation is disordered, hemorrhage finally ensues; during the first three months, a probable diagnosis can be made. A positive diagnosis of rupture is made by pain and collapse with profound anæmia. The child is usually not considered in the question of prognosis or operation; the prognosis for the mother, when the cases proceeded without operative interference, he found to be 68.8 per cent. mortality and 31.2 per cent. recovery. In 585 cases in which operation was performed, 76.6 per cent. recovered and 23 per cent. perished. Martin had enlarged Schauta's table and found that in 265 cases treated expectantly, 36.9 per cent. recovered, and in 515 cases operated upon, 76.7 per cent. recovered. His belief is that operation is invariably indicated. The morphine treatment of Winckel is not indorsed, nor the treatment by electricity; the ovum should be completely removed; when the foetal sac cannot be completely extirpated, it may be stitched to the abdominal wall or punctured and drained through the vagina."

It would be very difficult to find statistics of many of these "spontaneous recoveries to which Dr. Martin refers—nor is there anything in the experience of Mr. Tait, myself and others to fortify a faith in these miraculous recoveries. Dr. Martin's own statistics and his strong statements as to the fatality of these cases, where not early interfered with, goes to disprove many such recoveries. It is admitted

that even where spontaneous recovery does occur, convalescence is prolonged and there is danger of death from shock, hemorrhage and the development of septic infection. Localized pelvic peritonitis is also common. These facts leave little room for the frequent occurrence of such recoveries.

Summary of Cases (not including my own):

247 operative cases—	
206 recoveries.....	—82.75 per cent.
41 deaths.....	—17.25 "
132 palliative and expectant cases—	
62 recovered.....	—49.97 per cent.
70 died.....	—50.03 "
102 cases—	
21 no operation; no treatment; fetus quiescent throughout life.....	—20.58 per cent.
112 cases—	
Section operation.....	112
Expectant treatment.....	0
186 cases—	
Section operation.....	119
Expectant treatment.....	67
102 cases—	
Section operation.....	16
Expectant treatment.....	65
No treatment.....	21
400 cases—	
Section operation.....	247, — 61.75 per cent.
Expectant treatment.....	132, — 33. "
No treatment; quiescent.....	21, — 5.25 "
My own Cases:	
83 cases—	
Recoveries.....	86, — 96.39 per cent.
Deaths.....	3, — 3.61 "
These added to other operative cases:	
326 operative cases—	
Recoveries.....	282, — 86.51 per cent.
Deaths.....	44, — 13.49 "

ALL ONE TO CABBY.—It must be trying to a great personage to have his claims to distinction all unknown; but, however trying the situation, he had best be cautious about attempting to set it right. A Scottish gentleman learned this by experience.

He had a dispute with a London cabman over an eighteenpenny fare. He had offered a shilling only, and the cabman had remonstrated with him.

Drawing himself up with dignity, he said,—

"Eh, mon, but I think ye dinna ken whom ye're speaking to! I'm the Mac-Intosh!"

The cockney was not properly impressed: he retorted sharply,—

"I don't care if your the Humberella: I mean to have that sixpense!"—*Youth's Companion.*

CLINICAL LECTURES.

CORRECTION OF SYPHILITIC DEFORMITY OF NOSE; SYPHILITIC STENOSIS OF LARYNX; AMPUTATION OF LEG ON ACCOUNT OF COMPOUND DISLOCATION OF ANKLE; TORTICOLLIS COLLAR; REMOVAL OF BREAST FOR CANCER.

 ROSWELL PARK, A. M., M. D., BUFFALO, N. Y.

Here is a lad upon whom I operated last week. The operation was an experiment, proposed and accepted as such, with the hope of relieving a deformity which goes by no particular name but which consists in an absence of the bridge of the nose. This deformity is usually the result of hereditary syphilis and I presume that it is in the present instance, though the history and other confirmatory evidence is lacking. The boy works in an architect's office and has imbibed ideas of symmetry which have led him to seek an improvement of the shape of his nose. The operation consisted in making a small longitudinal incision on each side of the nose and separating, by means of a small chisel, the nasal bones from the nasal processes of the superior maxillary bones. The nasal bones were then pried upward and forward and held in place by a hare-lip pin, after drilling both bones and the nasal septum which, at this level, is the vertical plate of the ethmoid. Lead plates prevented the hare-lip pin from slipping inside the nose. The plates and pin will not be removed for a few days yet. The operation amounts to producing a compound fracture, and time must be allowed for the formation and organization of the blood clot so as to afford a firm foundation for the displaced bones. The patient expresses himself as satisfied with the result and you can see that his nose has a very good shape.

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This patient illustrates the evil results of tertiary syphilis when treatment is not properly persisted in. Two or three years ago, he was treated in this hospital during the secondary stage of the disease but left before he was sufficiently medicated and returned later for treatment in the tertiary stage. There is scarcely an area on his body as large as the palm of the hand, where there is not the scar of a syphilide which has previously ulcerated. Last

winter he developed a syphilitic laryngitis which became more and more chronic and proliferative, and one night the obstruction increased so rapidly that I was called by telephone about midnight to do tracheotomy. The emergency was so great that I believe a delay of five minutes would have resulted in the man's death. He is a very good patient in the hospital and obeys directions implicitly, but when he goes out he neglects to take his medicine and report for observation and he has paid dearly the penalty for his carelessness. He wore the trachea tube for so long a time that the larynx filled up completely with fibrous tissue, and he was unable to speak even in a whisper although he could form the words with his lips and blow through the trachea tube. Only those who were familiar with him could understand what he tried to say, and he often had to resort to writing to make himself understood. Some time ago I divided the thyroid cartilage in front and succeeded in reaching out the laryngeal passage. It was not so easy to keep the passage clear on account of the tendency to proliferative granulation and cicatricial contraction. The operation, therefore, was repeated in your presence. By removing some of the tissues and dividing others, I finally made an opening into which I could insert a tube, but I did not want to remove the trachea tube for fear that he might need to breathe through it again. I therefore had a hole cut in the convexity of the trachea tube through which a smaller tube was slipped upward to communicate with the pharynx. He thus has an improvised artificial larynx through which he can breathe and which allows the use of the lower tracheal opening if, through any accident, the upper passage should become clogged. He wears a cork in the trachea tube and is satisfied to talk in a whisper. At considerable expense, an

artificial larynx could be made with a vibrating reed to imitate the sound of the vocal cords. But the patient can not go to the necessary expense and it is by no means advisable that he should. I had one patient who discarded an elaborate artificial larynx because the monotonous and metallic sound of the reed made him too conspicuous and he thought it preferable to speak in a whisper.

Five or six weeks ago, a German, aged forty-five, slipped in getting off a street car and sustained a compound dislocation of the right ankle with a little chipping of the end of the fibula so that the external lateral ligament was loosened. He was taken to the Fitch Accident Hospital and treated expectantly, the part being kept immersed in a hot antiseptic solution. The idea was to afford an opportunity for recovery without the loss of the foot but with a stiff ankle. The case, however, has not done as well as might have been expected, sloughing has occurred and the joint surface is widely exposed. The case calls for some interference, possibly an atypical resection, perhaps a removal of the astragalus and the diseased soft parts; possibly amputation will seem advisable. The patient is a poor laboring man whose time is his only bank account. If I resect the joint, it will be at least six months before he can use the foot, while after amputation he can be about in a few weeks. I have presented the alternative to him with considerable hesitation, because the foot looks as if it might be saved if ample time were allowed. Still the patient understands that he can have a useful artificial foot attached to the stump, so that he will be practically as well off as if resection were successfully performed. I begin the operation, therefore, with the full consent of the patient to resect or amputate as seems better, not with the injunction so frequently given, to save the member at any sacrifice of time or expense.

On examination the tissues are soft and grumous, there is much infiltration about the sloughing surface and I remember that after the injury there was a cellulitis extending up the leg. I shall, therefore, amputate. The line selected is four inches above the malleoli and I will use the circular method. It will not be wise to close the tissues of the stump as closely as in

the amputations which you saw last week, for there is still some bogginess left from the cellulitis and I should feel safer to leave provision for drainage.

This is the little boy upon whom I did a tenotomy of the sterno-cleido-mastoid for torticollis. Although the obstacle to the natural position of the neck has been removed, the faulty habit remains and something is necessary to straighten the neck. If the child were to go among intelligent people, a series of exercises could be directed for this purpose, but he is leaving the hospital for associations in which we cannot rely upon help from others and some mechanical aid is necessary. I have therefore devised this plaster-of-Paris collar which is held in place partly by bandages partly by its own weight. It is not as elegant in appearance as a collar made of steel and leather, but it is inexpensive, the raw material costing perhaps five cents, and it will answer the purpose perfectly. It is made heavy and strong, for we do not expect to see the boy again for two or three weeks and I want the collar to be practically unbreakable.

The patient for whom we have been waiting, is a woman of sixty-seven who looks seventy-five. She belongs to that social class which has nothing before it but work, and she is thin and worn but still perfectly well so far as general health is concerned, and rugged. Five months ago she fell on the handle of a parasol and bruised her side and soon after, a lump appeared in the left breast, which has steadily augmented in size and has become more and more adherent to the overlying skin, until it is now firmly attached to it and the skin is reddened but without tenderness or heat or other sign of inflammation. Only by firm pressure can I cause any sense of discomfort in the tumor. The history and absence of local signs enable us to exclude acute inflammation. If this were an abscess, there would be the history of previous inflammation and there would now be fluctuation, which can not be detected. The mass is certainly a neoplasm in every sense of the word; but is it benign or malignant? The woman is at an age when such benign tumors of the breast—never very common—are quite rare and when malignant tumors are frequently found. There is close adhesion

with the skin, whereas a benign tumor would simply push the skin before it. The nipple is not retracted. One sign of malignant disease is lacking,—the enlargement of the lymph nodes in the axilla, but they may be slightly involved without being palpable through the skin. There is but one indication for treatment, the removal of the breast. Its functional activity ceased more than twenty years ago, and there can be only the vestiges of glandular tissue left. It is on this account that retraction of the nipple is not manifest. The great differences in the apparent size of mammary glands are due to the accompanying connective tissue and fat. Except in the matter of age, we are taking this case at a favorable time, for the lymphatics are little if at all involved.

I make the lower incision first so that the blood will not obscure the field of operation. You will notice that I include the nipple for, although the tumor does not appear to involve it, common sense dictates that all the glandular tissue in which the disease originated should be removed. Having taken out the breast, our next duty is to clean out the lymph-nodes in the axilla. Even if they are not enlarged, it is now held to be the only proper course to remove them for the purpose of future security. I consider that on the thoroughness of this part of the operation depends the exemption from a renewal of the disease in her case. Here is an enlarged lymph node which could not be felt through the skin. It shows how necessary it is to include the axilla in the field of operation in every case. The next step in the operation is the tying of the vessels which have been cut, among them the long thoracic artery. The wound is then sprayed with hydrogen peroxid solution. You will notice that the only part of the wound in which there is any chance for retention of fluids, is high in the axilla and I will insert a decalcified bone drainage tube here which will serve as a conduit for twenty-four or thirty-six hours, and will then collapse and be absorbed later. In making the counter-opening for this tube, I have tried to avoid the latissimus dorsi, but have been obliged to pierce it. The wound is now closed with cat-gut and covered with iodoform and antiseptic gauze. It is important to keep the arm absolutely still. I, therefore, apply a pad of cotton over the ordinary

dressing, flex the fore-arm across the chest and bind the arm to the body by the triangular application of the roller bandage.

HE GOT THE WHISK.—Mr.—had a new office clerk, who was recommended to him by the ladies of the W. C. T. U. for his strict temperance principles, which were exactly in accord with those of Mr.—himself.

"Peters," said Mr.—to the new man yesterday morning, "take some money from the drawer and go out and buy me a whisky."

"Trimmed or plain, sir?" asked Peters, with a glad, joyous look in his eyes.

"Plain, of course; the plainer the better; something solid and substantial."

Peters was gone about half an hour. When he returned he carried a big, thick tumbler in his hand full of a dark red liquid. His voice sounded as if he had caught cold.

"Here's your whisky," said Peters, setting the decoction down suddenly in front of Mr.—.

"Good heavens, man, what is this?"

"Whisky, whisky, that's what," said Peters, mysteriously.

"But I wanted a whisky-broom."

"Why didn't she say so? Thought it was 'breviation for whiskey. Nemmer mind, it won't be wasted." And he swallowed it on the spot.

Peters is again looking for a place.
—*Detroit Free Press.*

MA'S SHOE-STRINGS.—Susie's mother sent her to the shoe-store the other day for some shoe-strings. The little girl tipped the door-latch and slowly walked up to the proprietor.

"Mamma sent me down for a pair of shoe-strings," and Susie fingered her money nervously as she looked into the dealer's face. The latter turned to a bunch of strings upon the wall and began to pull a couple out. Then he stopped.

"How long does she want them?"

Susie looked flustered. "I don't know, but I think mamma wants them to keep."

—*The Wasp.*

A PRECARIOUS EXISTENCE.—He—"No, the boss doesn't pay me more than I'm worth."

She.—"How in the world do you manage to live on it?"—*Lippincotts.*

COMMUNICATIONS.

CONTRIBUTIONS TO THE STATISTICS OF RENAL SURGERY.*

DR. JAMES ISRAEL.

By primary nephrectomy the author understands the immediate removal of the kidney during the first operation; by secondary, the removal of the kidney on which nephrotomy had previously been tried. He places stress upon the high mortality of the secondary, in comparison to primary nephrectomy: three cases out of four were lost where secondary nephrectomy was done. One death was due to iodoform poisoning; in the other two cases the primary operation would undoubtedly have given better results. One of these cases suffered from pyonephrosis, for which nephrotomy had been performed seventeen months before, leaving a fistulous tract to the kidney; the urine was clear at first, but gradually retention pockets formed in the operated kidney, which persistently returned in spite of the dilatation of the fistula; and fourteen months after, a swelling of the other kidney could be demonstrated. Uræmic attacks followed so that seventeen months after the nephrotomy, nephrectomy became necessary; the patient died eight days after the operation. The specimen showed extreme lipomatous changes, leaving only slight traces of kidney substance, the ureter was also surrounded by masses of fatty tissue. The third patient succumbed on account of extensive pathological changes in the other kidney.

The author advises, from the experience of these cases, primary extirpation of the kidney, even where the other be slightly diseased, as the patient has more chances for entire recovery.

He proposes, if the operation is necessary on one kidney, to do the primary operation, even if the disease has attacked both kidneys.

In suppurating processes of the kidney, he also advises prompt and primary nephrectomy; should the kidney be filled with abscesses leaving but small portions of its parenchyma, so necessary for the

uses of the human economy, it has been deemed proper to leave that parenchyma, so far as possible, intact, until satisfied as to the condition of the other kidney.

If primary nephrotomy has been made and, at a later date, it is demonstrated that the second kidney is normal, it is necessary to perform nephrectomy of the first as quickly as possible.

The study of the condition of the second kidney is, in spite of various methods given, often very difficult. The author proposes in certain cases, to ligate the ureter of the affected kidney, which will give a certain amount of information as to the condition of the second.

The author presents, in a critical manner, the results of his renal operations. In those operations classed as primary, death occurred thrice. One patient, a female, was 56 years old, with a carcinoma of the right kidney. The first symptoms were noticed ten years before consultation; the left kidney seemed normal. The operation was easy and rapid, but death resulted in forty hours from vomiting and meteorism. The autopsy proved a normal condition about the wound; there was brown atrophy of the heart; in the left kidney a slight parenchymatous cloudiness could be detected. In a fatal case of nephro-lithotomy, the same condition was found. The author makes the important statement that no chemical solutions, iodoform, sublimate, etc., had been used. It was thought that possibly chloroform narcosis of long duration may have acted upon the kidneys.

In seventeen operations without complications, fourteen cases presented a slight affection of the remaining kidney, as albumen, hyaline and cylindrical casts and red blood corpuscles, etc., had been found in the urine. The same condition was found in a nephrectomy of some standing, and in a narcosis of long duration. In the third case of nephro-lithotomy, death was caused by septic inflammation of the operated kidney produced by

* Read before the *Freie Vereinigung der Chirur.*, Berlin, 1893, and translated by M. B. Werner, M. D.

the patient having frequently torn the drain out of the wound.

In this patient the author saw for the first time a reflex aneuria. The patient suffered for a long time from renal colic of the left side and the left kidney was enlarged and painful. These attacks of pain were often eased by sudden palpation of the kidney and the secretion of urine was immediately reinstated, and, since the right kidney seemed healthy, there appeared to be but one explanation, that of reflex aneuria. A longitudinal incision into the pelvis of the kidney demonstrated the presence of a stone (removed) which had acted, for six days, as a check valve to the ureter. Closure of the renal pelvis could be done only on the lower four-fifths; above, the capsule of fat was drawn together and sewed fast; almost immediately after the operation urine passed through the bladder and wound; after two days all the urine passed through the bladder. This was proved by endoscopic examination when directed towards the right ureter.

The production of a reflex aneuria is illustrated in the following case: A man suffered for years from an intermittent hydro-nephrosis with consequent attacks of hæmaturia; pressure by the distended cavity acted as a dam to the secretions of the healthy kidney. Puncture of the sac reinstated the flow of urine.

Another case also is explained as a reflex aneuria. In this particular patient the right kidney had been extirpated for hydro-nephrosis, the wound sewed and a drain inserted. The result was normal up until the sixth day, when the secretion suddenly became scant and marked pain could be traced to the location of the extirpated kidney. Considering that a portion of the drain caused pain at the stump, the drain was removed and at once there was an increase of urine and a disappearance of pain. Microscopically the urine contained a large quantity of microliths, formed probably from a central epithelial cell with an onion like covering. In the extirpated kidney small microliths of similar character could be found.

The last fatal case the author has had up to date, was a woman suffering from painful right-sided renal colic, in whom, though palpation was negative, incision was considered necessary for diagnosis.

There was nothing found abnormal; the rather large wound of the kidney was closed by deep and superficial catgut sutures, and a compress bandage ended the operation. Soon after the operation, vomiting set in, tympanites and increased pulse. On the second day the bandage was taken off; the fifth day colotomy was performed but without success. The autopsy revealed a small intestine greatly distended; in the large intestine, a stagnating fecal accumulation; beneath this a contracted portion with slight bloody effusions; there was a similar condition found at the colon transversum in the region of the right flexura. The author expresses his opinion that the unfortunate result was probably due to the decided compression of the bandage, which had produced irritation of the nerves of the intestines. He has, therefore, returned to the belief that renal bleeding can be controlled by manual compression, after the closure of the wound by deep catgut sutures. As a proof he mentions one case in which the kidney had been completely cut in half, the bleeding being arrested later on by several deep, and a few superficial catgut sutures.

OPERATIONS.	No. of cases.	Deaths resulting from operation.	Percentage
Primary Nephrectomy	29	3	10.3 per ct.
Secondary Nephrectomy	4	3	75 per ct.
Nephrotomy	11	1	9 per ct.
Opening down to the entire ureter and Pyelotomy	1	0	0 per ct.
Nephro-lithotomy	5	2	40 per ct.
Nephrorrhaphy	3	0	0 per ct.
Exploratory abdominal incision down and into the kidney reaching the pelvis	4	1	25 per ct.
Puncture of the capsule Propia	1	0	0 per ct.
Drainage by Puncture	2	0	0 per ct.
Exploratory incision of the kidney with shelling it from its capsule fat	3	0	0 per ct.
Closure of a fistula from the kidney by operative means	1	0	0 per ct.
Incision for Perinephritis	7	0	0 per ct.
Total	71	10	14 per ct.
Of 33 Nephrectomies there were			
Malignant tumors	12	2	16.6 per ct.
Syphilis	2	0	0 per ct.
Tuberculosis	3	0	0 per ct.
Hydro pyonephrosis, abscess of the kidney	17	4	23.5 per ct.
Total	33	6	18 per ct.
Of these Primary extirpations	13	1	7.6 per ct.
Secondary extirpations	4	3	75 per ct.

HEART-DISEASE OR KIDNEY DISEASE?*

JAMES TYSON, M. D.†

I have myself so often been mistaken in the first conception formed of the relation between a combination of symptoms for which heart or kidney may be responsible, and have so frequently had occasion to share the difficulty with others, that I have been forced to give the matter some thought; and it seemed to me that so practical and important a subject might also be interesting to the members of this Society.

The difficulties met under these circumstances will, I think, be better appreciated by the brief story of four or five illustrative cases:

CASE I.—O. E., a shop-girl, aged fourteen, was admitted to the Hospital of the University of Pennsylvania, October 31, 1892.

Her mother is said to have heart-disease, but the family history is otherwise negative. The patient herself had measles in childhood, but, with this exception, reported no illness until that for which she sought admission. This set in apparently only three weeks previously, when she noted that her legs were swollen. Shortly after this she became short of breath. She continued, however, to perform the duties of her position up to the time of her admission to the hospital.

On admission, her appearance was most striking. A lustrous pallor pervaded her entire body—in fact, she presented the characteristic waxy hue of chronic renal disease. Her feet and legs were much swollen, as were also the right hand and face. To a less degree she was everywhere edematous, though more so on the right side, on which she mostly lay. The urine was dark-hued, had a specific gravity of 1030, was loaded with albumin, and contained numerous granular casts.

My colleagues, as well as myself, all said a "typical case of renal disease." The urine examination seemed scarcely necessary. The diagnosis could be made at a glance. As a matter of course, however, her heart was also examined. The apex-beat in the fifth interspace was fore-

ible and rapid, from 108 to 120, while the respirations numbered from 40 to 43 in the minute. On palpation, a cardiac thrill, systolic in time, could, in addition, be appreciated.

Percussion determined the upper border of cardiac dullness to the left of the sternum, at the superior edge of the third costal cartilage; the right border one inch to the right of the right margin of the sternum. There was, therefore, enlargement of the right side of the heart, as well as of the left. There were the signs of pleuritic effusion on both sides. Auscultation recognized a double murmur, most intense at the apex, with the systolic portion conducted into the axilla.

Here was a case of mitral disease—regurgitation and probably stenosis with right-sided dilatation; but the intense waxy appearance and the pronounced albuminuria led us to believe that there was also positive renal disease, probably subacute parenchymatous nephritis.

The girl was ordered absolute rest in bed, five minims of tincture of digitalis three times a day, and caffein citrate three grains every four hours. Copious diuresis set in, and at the end of five days the dropsy was almost totally gone. The scanty urine had increased until it had reached 62 ounces, while the albumin and the casts had entirely disappeared. The change was almost incredible. I had never seen such a striking one in so short a time. The mitral murmur continued showing that the heart disease was the permanent one, and the idea, almost irresistible at first, that there was some special form of renal disease, independent of the passive congestion due to the cardiac disease, was dissipated.

She remained in the hospital until December 24. Once there was a return of the albumin and a few granular casts, concurrent with an attack of bronchitis, but these again disappeared, and she was discharged seemingly quite well. The diastolic part of the double mitral murmur finally also disappeared, and the heart had been restored to its original dimensions, but the mitral systolic murmur continued, and is likely to be permanent.

* Read before the Pennsylvania State Medical Society, 1893.

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CASE II.—F. R. P., a bank-officer, aged forty-two, was seen in consultation with Dr. S. R. Crothers, of Chester, Pennsylvania, on November 19, 1892. With the exception of typhoid fever, ten years before, and an attack of influenza in December, 1891, he had never been seriously ill. About one year previously to his visit to me, he first began to have attacks of palpitation of the heart and shortness of breath, with headache. He was treated for "functional trouble," and improved sufficiently to return to work. In this, however, he overtaxed himself, and at the end of about two months he was again compelled to give up. Although he spent much of the summer at the seaside, there was not improvement sufficient to permit his return to business. All of this time his symptoms pointed to heart disease, and his own belief and that of his family were that this was his principal, if not his sole illness.

At the date of his visit to me there were aggravated dyspnea and cough, but the headache, from which he had before suffered so much, had disappeared. There was also nausea, especially in the morning, but at times also early in the day, associated occasionally with diarrhoea. His complexion was intensely shallow—almost cachectic.

On inquiry I found that his feet were a little swollen at night, but that this swelling disappeared each morning. Examination of his heart disclosed enormous hypertrophy of the left ventricle, the apex being lowered and displaced to the left. The aortic second sound was accentuated, but there was *no murmur*. The action of the heart was tumultuous, its rate frequent, its rhythm gone.

The urine throughout has been copious, light-hued, and low in specific gravity, until a short time before his visit, when it had become scanty and high-colored; but at the time of his visit, through the action of diluents and diuretics, it was increased to 64 ounces in the twenty-four hours. A portion of this examined by me had a specific gravity of 1012, and contained only one-twentieth per cent. of its bulk of albumin and a small number of hyaline casts.

In this case the prominent symptoms were cardiac, in contrast with Case I, in which the most striking symptoms pointed to the kidneys as their source, and in fact

were at the time caused by renal complication. Yet the former was primarily a case of renal disease.

This is a state of affairs that supervenes on an interstitial nephritis, a gradual hypertrophy of the left ventricle, the rationale of which is not perfectly agreed upon, but which I am inclined to look upon as a compensatory hypertrophy, maintaining the individual in tolerably good health until compensation begins to fail, when the symptoms of cardiac distress described set in, and increase until death takes place, as in this case, suddenly, from simple cardiac failure, or, as is perhaps more frequent, from uremia.

In this instance, therefore, a case of primary renal disease was overshadowed by cardiac symptoms in so marked a degree as to cause the latter to be overlooked.

CASE III.—A. G. B., a retired merchant, aged sixty-two, consulted me first on the 16th of April, 1892. He had a clear family history of gout, his father being gouty years before his death, and dying suddenly. The patient himself had been subject to attacks of gout for a number of years, and had cretaceous deposits in his knuckles. He had an attack of influenza in the early part of 1890, and another in May, 1891; but during the year previous to his consulting me, he had been more than usually exempt from gout.

Albuminuria was discovered by Dr. Pepper in May, 1891. Following this the patient spent the summer in Europe. While in Europe the albumin disappeared, and continued absent until a few days before he consulted me, when its presence was discovered by his son, a medical man. He also noted at this time a little dyspnea on exertion, but with these exceptions felt as well as usual. His last evident attack of gout was on board ship, in the autumn, while returning from Europe.

At the time of his visit to me, in April, 1892, I examined his urine, morning and evening samples. Each contained one-tenth of its bulk of albumin, but I found no casts in either sample. The morning urine had a specific gravity of 1016; the evening, of 1014. I concluded promptly that I had to do with a case of chronic interstitial nephritis of gouty origin.

In June following his visit to me, the patient again went to Europe, and returned

late in September, 1892. He had a couple of slight attacks of gout during his absence, and a little oppression in breathing on shipboard, so that he had to sit up in his berth. During the month of June there was some irregularity of action of his heart, which he ascribed to flatulence. With these exceptions, he considered his health even better while in Europe, in the summer of 1892, than in the previous summer.

On November 21, 1892, he again consulted me. He complained of flatulence, and of what he termed wind pressing on his heart. This prevented him from lying down in comfort. He also thought that it caused cough. On the day before his visit he first noted a little swelling of his feet.

I now examined his urine again. It was darkened-hued, contained one-tenth of its bulk of albumin, and this time I found a few hyaline casts. There was also a little swelling about his ankles, and auscultation disclosed an evident mitral systolic murmur. I prescribed rest at home (he had been attending to some business), salicylic acid, pepsin, and aromatic powder; for the flatulence, also hot water before meals; and for the dropsy, a pill containing digitalis, quinine, squill, and nux vomica. In a few days the edema had disappeared, and the dyspnea was partially relieved. A few days later both symptoms returned, and although again relieved for a time, they proved ultimately intractable. There was dulness to the right of the sternum. Evidently the right ventricle was yielding. The urine became more scanty, the albumin increased, as also did the cast, and the patient died suddenly December 20.

Case IV.—John W., a colored laborer, fifty-two years old, was admitted to the Hospital of the University of Pennsylvania, April 18, 1893. His family history was negative. He had had a bad attack of typhoid fever thirty-five years ago. Eight years ago, while working in a brick-yard, he suddenly fell, and was unconscious for about four hours. With returning consciousness came unimpaired muscular power; but four years later he awoke one morning completely paralyzed on his left side, without any evidence of anything else happening in the night. At the end of three days, however, he began to regain power in the arm and leg of the affected

side, and in three months was able to move around with the aid of a cane.

His condition in this respect has been improving steadily, but two years ago he noted that he was short of breath, and last winter this symptom grew worse, while edema of the legs was superadded. These symptoms finally became so aggravated that he entered the Philadelphia Hospital, whence, after six weeks, he was discharged, greatly relieved.

Two weeks previously to admission to the University Hospital he again became ill, the chief symptoms being enormous swelling of the legs, orthopnea, and a dry, hacking cough, very troublesome at night. On admission we noted also irregularity of the heart, hypertrophy of the left ventricle, and an easily recognizable mitral systolic murmur. There was also the remnant of the left-sided paralysis, and on this side the edema was much greater than on the right side. There were the signs of effusion in the left pleural sac, and the percussion boundary of the liver indicated some enlargement.

The urine was albuminous, but no casts were found.

The diagnosis here made was mitral regurgitation, a diagnosis that was thought to be sustained by the enlargement of the liver. Treatment proved ineffectual, and the man died less than three weeks after admission.

At the necropsy there was found enormous eccentric hypertrophy of the left ventricle, with dilatation of the right ventricle, both cavities, and especially the right, being distended with blood. The heart weighed 1000 grams with the blood in it—750 when emptied, the normal weight being about 337 grams. The mitral leaflets were a little thickened, but essentially normal. The aortic cups were normal, as were also the valves of the right side of the heart.

There was a large effusion in the left pleural cavity, as recognized before death, and a patch of congestion in the lower part of the lung. The liver weighed 1285 grams, and was not, therefore, enlarged, the normal weight being from 1550 to 1860 grams.

Both kidneys were enlarged, the right weighing 210 grams, the left 220 grams, the normal weight being from 130 to 150 grams. The cortices especially were widened, and the seat of chronic parenchy-

matous nephritis, which, in the light of the autopsy, I regarded as the cause of the hypertrophy of the left ventricle.

I have selected, from among many cases these four of combined cardiac and renal disease, in which there was, at the beginning, and in some throughout life, more or less erroneous conception of the exact state of affairs. The first case, that of the shop-girl, aged fourteen, was supposed to be a case of chronic parenchymatous nephritis, while further study showed it to be one of primary valvular disease of the heart, with secondary passive congestion of the kidney.

The second case was one of chronic interstitial nephritis, with hypertrophy of the left ventricle, in which all of the symptoms pointed to primary heart-disease but the true nature of which was easily revealed upon closer study.

The third case was a more complex one than either of the others. An ancestry of gout; a personal history of much gout; an albuminuria, at first small; absence at first of casts, and then sparse casts, all pointed to gouty kidney a supposition by no means weakened by the oppression and dyspnea, symptoms that almost always supervene when the hypertrophied left ventricle of chronically contracted kidney begins to fail. On the other hand, the evident mitral murmur, the moderate degree of hypertrophy of the left ventricle, the stretched right ventricle, the irregular heart, the gastric catarrh, and the dropsy, pointed to a condition of mitral regurgitation which I cannot but think was also present, a view in which I was also sustained by Professor Da Costa, who saw the case with me. Yet the problem was a difficult one, and the question, "heart or kidney?" was carefully debated. It seemed to us that in this case doubtless both were effected independently of that interdependence that always exists between these two important organs. That is, there was interstitial nephritis and endocarditis, both the results of the same cause—gout—and the cooperation of these two conditions accounted for the intractableness of the case. Unfortunately, in this case there was no autopsy to settle the question, and it must always remain a matter of probabilities.

That such a state of affairs does occur is shown by the following interesting case:

Case V.—C. K., a Russian coal-miner,

aged twenty-eight, from Schnylkill County, was admitted to the Hospital of the University of Pennsylvania, April 12, 1893. On account of his total ignorance of English, no family or previous personal could be elicited, except the indefinite statement that his feet had been swollen for ten years, and yet that he was perfectly well up to three weeks before admission, and working in a coal breaker.

On admission he was gasping for breath, in an unpleasant, grunting manner. His heart was extremely irregular, and at times beat so rapidly that it could scarcely be counted. It is noted soon after admission at 144, again at 166. His respirations were noted at 36; and when his pulse was 166 the respirations were noted at 46. His temperature was normal. His belly was distended with fluid. There was edema of the feet and legs—in fact general anasarca—and he lay in such a stupid state that it was difficult to get any information from him. On admission he was expectorating a blood-stained mucous, regardless of time or place.

Physical examination revealed the liver to be much enlarged and tender; the heart not much enlarged, but acting tumultuously, and no murmur could be detected. Subsequent examination showed the right boundary of the right ventricle at the right edge of the sternum, indicating enlargement of the right heart. The examination of the lungs, on admission, was not satisfactory, because of the extreme illness of the man, and his disgusting, filthy state. The urine was scanty, high-colored, and bile-stained. It contained only a moderate amount of albumin, from one-twentieth to one-eighth of its bulk, but numerous hyaline and pale granular casts.

Under full doses of the infusion of digitalis he improved quite rapidly, the pulse and breathing rate coming down gradually. The rhythm of the pulse also improved, and the anasarca diminished. On the 30th of April his pulse had fallen to 64, and my note reads: "Although the pulse is slow and forcible, no murmur is detectable, yet we feel sure there is mitral regurgitation." His improvement was, however, so great that he was even allowed to sit up. On May 5, his temperature began to rise, and concurrently his breathing to be more frequent. On the

11th the signs of fluid in the left pleura were apparent (probably had shown themselves a couple of days earlier, because, on account of difficulties, he was not examined daily). The respirations were 50, but the pulse did not rise above 108, for the first time a distinct mitral systolic murmur was audible. On the 14th it was thought a murmur was heard, but repeated examinations, even when the heart was at its best, failed to detect anything definite until the 11th. The man died suddenly a day later.

The necropsy was most instructive. The lesions were numerous, but the most interesting in this connection was the association of extreme mitral stenosis, in the shape of a button-hole mitral orifice, and a pair of typical large white kidneys, beginning to undergo contraction. There was also enlargement of the heart, more especially in the direction of the right ventricle, as recognized before death, associated with marked dilatation of the left auricle. There was a left-sided empyema of recent origin, as shown by a fresh layer of thick lymph, probably the immediate cause of death; anthracosis, or miner's lung, with cavities; an enlarged hypertrophically cirrhotic liver; an enlarged spleen with two pyoid sacs, probably softened infarcts.

The fourth case was a complete surprise in the light of the autopsy; yet I am doubtful whether, with the situation repeated, I would make different diagnosis. The distinct mitral systolic murmur and the extreme anasarca, the scanty urine and plural effusion, all combined to favor the idea that there was mitral regurgitation, while the fact that the man had had two seizures, best explained on the supposition of cerebral embolism, of which a cardiac embolus is the most common cause, seemed to add all that was required to make the diagnosis absolute. One symptom only might have suggested a renal origin, and that was the degree of hypertrophy of the left ventricle, without aortic disease. Mitral regurgitation, while causing hypertrophy of the left ventricle seldom produces the extreme hypertrophy that attaches to aortic valvular disease or chronic renal disease without aortic valve disease. At the same time the extent of this hypertrophy was not appreciated before death, because of the difficulty of investigation occasioned

by the naturally thick chest-walls further thickened by anasarca infiltration. Under the circumstances, the mitral murmur is best explained on the supposition that there was mitral regurgitation consequent on the dilatation of the hypertrophied left ventricle.

Yet, notwithstanding the difficulties encountered in the separation of heart-disease from kidney-disease, there are certain points that, if borne in mind, aid in the discrimination. These points, already referred to, deserve, in conclusion, to be recapitulated: First, the conditions most likely to be associated or confounded are on the one hand, mitral disease and, on the other, chronic parenchymatous nephritis, and the last stage of interstitial nephritis, when the urine, from having been copious and light-hued, becomes scanty and dark-hued, because of failing cardiac power.

CHRONIC PARENCHYMATOUS NEPHRITIS.

Urine scanty and high-colored; high specific gravity; highly albuminous.

Numerous granular, dark granular or fatty casts.

Much dropsy.

No mitral systolic murmur.

As a rule no hypertrophy of left ventricle, which may, however, be present at times.

No enlargement of liver.

No signs or symptoms of arterio-capillary fibrosis.

No retinitis albuminurica.

No history of gout.

Seldom a history of rheumatism; more frequent of infectious disease.

Uremia infrequent.

Partial response to treatment.

CHRONIC INTERSTITIAL NEPHRITIS.

(Last stages.)

Urine though scanty is still light-hued, and has low specific gravity; moderately or slightly albuminous.

Few casts and these hyaline or slightly

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granular. Often no casts.

Little dropsy as a rule, though when heart fails, dropsy may be marked.

No mitral murmur.

Always marked hypertrophy of left ventricle, except in persons feeble and cachectic at the outset; this without aortic murmur.

No enlargement of liver.

Symptoms and signs of arterio-capillary fibrosis may be present.

Retinitis albuminurica may be present.

History of gout, lead-poisoning, or free eating and drinking.

No history of rheumatism or infectious disease.

Uremia frequent.

Doubtful response to treatment.

MITRAL DISEASE.

Urine scanty and high-colored; high specific gravity; moderately or slightly albuminous; rarely highly albuminous.

Few casts, hyaline or slightly granular.

Much dropsy; effusion into serous sacs.

Mitral murmur.

Moderate hypertrophy of left ventricle; hypertrophy of right ventricle.

Enlarged and tender liver.

No arterio-capillary fibrosis.

No retinitis albuminurica.

Seldom a history of gout, alcoholism, or free eating and drinking.

Probable history of rheumatism or infectious disease.

No uremia.

Generally prompt response to treatment.

These points of diagnosis refer more

particularly to uncomplicated cases. With complicated cases the difficulty is greatly increased, and the decision must be one of probabilities. A fact of great value in my judgment in favor of a primary and advanced kidney-disease, is the failure of heart-tonics like digitalis, to produce diuresis, even though the pulse-rate is decidedly reduced by the action of the remedy.

Now, what is the practical bearing of these considerations? I answer, not so much in the direction of therapeutics as in that of prognosis. For, happily, the treatment of these conditions is essentially the same, and to this subject I have given very full consideration quite recently elsewhere. In the matter of prognosis, however, it is of the extreme importance. For in cases of pure mitral disease, not too far advanced, the most favorable prognosis may be given, as evidenced by our experience with Case 1. In the stage of renal disease under consideration, however, and in the combined form with actual structural change in both heart and kidney, the prognosis is very unfavorable, and to mistake the one condition for the other, and to prognosticate accordingly, may seriously jeopardize one's reputation.

BRONCHO-PNEUMONIA.*

J. C. H. LAWRENCE, M.D., GREEN BAY, WIS.

Considering broncho-pneumonia from the standpoint of immediate fatality, and also as a causative factor in later developed chest troubles, it may be classed the most grave of children's diseases peculiar to this northern country.

It has been defined as an acute inflammation of the bronchial lining membrane, which by direct extension and mechanical phenomena incidental to the disease, involves the connective tissues, bronchioles and air cells. Thus the whole lung structure may in severe cases take on inflammatory action.

There is little doubt in my mind that

1 "The Relations between Renal Disease of the Circulatory System," International Clinics, Vol. 4, second series, 1893. "Treatment of Chronic Valvular disease of the Heart," *Therapeutic Gazette*, April 15, 1893.

* Read before the Fox River Valley Medical Society, 1893.

many of the deaths from so-called bronchitis and croupous pneumonia, are due to broncho-pneumonia. Again, it is one of the greatest complications of measles and whooping-cough, and may, in many cases, be the direct cause of death credited to these diseases. Bear in mind also, that a large percentage of all cases of pulmonary consumption have their starting-point in the disease.

Changes of temperature and humidity unquestionably influence, if not cause the disease.

It is found to be non-prevalent in families and localities where bad hygiene prevails, but seems in this latter instance to take on a more unfavorable course. Some authorities claim for it a specific origin, even having gone so far as to discover a micrococcus.

Probably the disease starts by an irritation of the bronchial mucous membrane, from various causes, and is developed by direct extension to the lung tissues. When it occurs as a complication of measles, extension takes place more rapidly than in the simple form, the initial stage being so short as to render it unappreciable. Notwithstanding its extremely short duration however, pus is formed in the smaller bronchioles and air cells with alarming rapidity and profuseness. Attended by whooping cough on the contrary, its advent is slow and insidious. Occurring as a distinct disease itself, the bronchial stage may last from three to ten, sometimes twenty, days.

When the lung tissue is invaded the temperature rises to 103° or 105° . The cough becomes hacking, painful and frequent. The inspiration more rapid, shallow and difficult. The countenance takes on an anxious look as efforts to breathe become more labored. The progress of the inflammation may be extremely rapid so that all the lung tissues may be at once involved, or it may be slow and gradual, occupying several days. When large areas of lung substances collapse, temperature falls. The cough becomes less, sometimes disappears. The countenance becomes livid, the skin cool and clammy with more or less perspiration. The distress for breath momentarily increases and unless the condition soon changes for the better, death rapidly follows. Successive collapses, occurring in other parts of the lung are accompanied by symptoms similar to those enumerated, but their onset is more gradual. Death may result from exhaustion following lung fever, cough and continuous struggle for breath. When recovery takes place the period of convalescence is very prolonged, so much so in fact, that it is difficult to define the stage of resolution.

It is during dentition that bronchopneumonia most frequently occurs. It has also been observed that scrofulous and rickety children are almost apt to contract it.

It can scarcely be confounded with any other disease except croupous pneumonia. To be sure it resembles acute bronchitis in the beginning, but the evidence of grave conditions may not be accounted for by a simple bronchitis. It differs from croupous pneumonia in that the attack often

follows previous illness, as whooping cough or measles. The fever rarely reaches $104-105^{\circ}$ in the first twenty-four hours of the attack. Dyspnoea more pronounced; accessory respiratory muscles brought into action; patients are usually under three years of age; consolidation of patches of lung on both sides, over which dullness on percussion is not marked; moist subcrepitant rales and occasionally coarse crepitation; its indefinite duration, prolonged convalescence and fatal tendencies.

Physical examinations reveal very little in the beginning, and it is only after the disease has made some considerable progress that we are enabled, by this means, to differentiate it from other forms of lung trouble. Hence we have to rely mainly on rational signs. The respiration, as the bronchioles and parenchyma become implicated, increases in frequency, sometimes numbering 60 to 70 per minute. The pause which ought to follow expiration now precedes it; costal breathing takes the place of abdominal; and retraction of the epigastrium and the intercostal and supraclavicular spaces are further evidence of incomplete expansion of the lungs. The pain which accompanies the respiration may be due to pleuritis, but the moaning sound on expiration may be present when no pleuritis can be found, and then it is not always to be accounted for. Hydrothorax is extremely rare though pleurisy is present in a large percentage of cases, and generally circumscribed. The tongue and mouth, in protracted cases, become dry; sordies collect; thirst is intense; frequently there is vomiting and diarrhoea; stupor in varying degree, is nearly always present—sometimes it is so profound as to simulate coma.

The prognosis should always be guarded, for although the physical signs show little to cause alarm, consolidation and collapse may come on without warning and speedily render a seemingly mild case a very grave one. In children of one year and under the fatality is greatest, the younger the child the less the chance of recovery.

Has there been previous illness? Especially whooping-cough or measles? What are the powers of resistance in the child? Does it take and retain nourishment? Is there diarrhoea? Does the temperature remain high for a considera-

ble time, and if so, how does it affect the patient? Is the heart's action strong? If not, how is it affected by stimulants? Is there stupor or delirium, and how severe? Is the cough loose, and are the efforts strong enough to force the bronchial secretions above the glottis? These are all pertinent questions concerning which we should satisfy ourselves before making statements or promises which might afterward make us appear at fault.

So far as possible, provide for the comfort of the patient. It should have intelligent nursing; the room should be well lighted and ventilated, and a temperature of 70° F. maintained. Water in an open vessel should be kept constantly on the stove. If this does not moisten the air sufficiently, steam may be produced by dipping hot flat-irons or bricks into water. Poultices on the chest are worse than useless. Apart from the trouble of preparation, they might embarrass respiration and are uncomfortable, hot or cold. I find the best results from using a vest of cotton batting next the skin, covering the entire chest, sides and back. It should fit snugly but not tight. The patient

should be bathed frequently without removing the covering.

If opiates are indicated, the camphorated tincture, or the syr. Doveri, combined with solution of acetate of ammonia, will be found the most convenient. For the cough, apomorphia in doses of 1-200th gr., may, if necessary be repeated every half hour until vomiting is produced. These are only adjuvants however, to the remedy in which I place main reliance, which is calcium sulphide. It not only relieves the fever and cough, liquifies the bronchial secretions, prevents diarrhoea and vomiting, but it cuts short the attack and reduces to a minimum the liability of the disease leaving behind it any serious after effects. I find a ten per cent. triturate, in one or two grain doses, the most convenient and efficient. Powders may be placed upon the tongue, either dry or slightly moistened, and repeated often enough to produce and maintain the characteristic odor in breath and gaseous dejections. Diet should be light and nourishing; water freely allowed; brandy or whiskey in water or milk during attack, and to hasten convalescence change the air, etc.

SOCIETY REPORTS.

WESTERN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Annual Meeting, Kansas City, Missouri, December 27th, 1892.

[OFFICIAL REPORT.]

DISCUSSION OF PAPER SURGERY OF TUBAL PREGNANCY.

[This paper appears on page 507 of this issue]

DR. KING: Mr. President, I feel very much like doing as I heard of a gentleman once doing, who got tired saying his payers at night. He wrote out a beautiful prayer and pasted it up on the head of the bed, and when he retired, he pointed to it and said, "Lord, those are my sentiments."

I have not had the experience in this subject that would warrant me in discussing this paper and undertaking to advance new ideas upon it or in any way to con-

trovert any of the positions taken by the writer. Dr. Price has certainly had enough experience in this matter to warrant him in taking and holding the position which he says he has proven at the bed side with his apron on. Knowing him, as we do, as a worker and a thinker, we are bound, at least I feel bound, to accept his opinion.

I say I have had no experience in this matter; I mean to say that I have had no experience in operating. Some years ago I saw three cases, in the course of six or seven years, that I diagnosticated, under the then teachings of Emmet and others, as being pelvic hæmatocele—three cases in

which there had been sudden rupture with hemorrhage, which was made manifest by the doughy feel through the vagina. In one instance I remember it appeared so low down at the side of the vagina as to make it perceptible to the eye. I then called them hæmatocele, and I have no doubt now in the present advanced knowledge of the matter, they were all three cases of ruptured tubal pregnancy. I presume in those three cases the fetus escaped upward, and, as I wrote to Dr. Price when he got through his speech, that

"My little cases sat upon the pancreas
Waiting for Dr. Price to come;
And to while the weary time away,
Played upon the light duodenum."

Neither of the women died; they all three got well. How they are doing now, I can't say because I have not had a chance to observe the cases since. I saw two of them in consultation, and one of them in my own practice. One of them finally moved away. I don't know what their condition has been since. I saw another case, which without rupture, I diagnosed as tubal pregnancy; it was seven years ago and, following the advice of Beard and Rockwell in the methods for destroying the fetus with currents of electricity, I used that. After using it for three or four times there was a decided diminution in the size of the tumor. I felt satisfied that I had destroyed the fetus. Last week I was called to see this same woman in Sedalia, my old home, and I found her in bed with this history: up to a few months ago she had been unusually healthy; she had gained in flesh and had been stronger. I believe she had not missed her menstruation, but had gone to bed recently with a hemorrhage, and upon examination the physician made out what he thought was a fibroid tumor, and what I am satisfied was a nodular fibroid. In the examination I made I found a fibroid which seemed to have bored posteriorly into what was no doubt a retroverted uterus, with one projection of the tumor anteriorly up into the abdominal cavity, some old mass in the region of the left tube and the ovary softening and appearing to be an abscess. The woman had had a rise of temperature. She will come here in the course of two or three weeks, for operative procedure and some of you will perhaps see the case with me and we will see what it is. I think I destroyed

the fetus at that time and now there has followed the development of a fibroid tumor. The woman is thirty-eight years old, and bore one child twelve years ago, and this condition you know has favored development of a fibroid. I think she has a very complicated tissue there. I will perhaps remove the tubes and ovaries with this mass, and perhaps do an abdominal hysterectomy.

I want to say in conclusion, that I do not undertake to discuss this paper; my experience doesn't warrant it. I must accept what Dr. Price has said. But I do want to join with the members of this society in thanking Dr. Price, not only for the admiral paper but for the admiral teaching he has done in his visit here.

REFINED TASTES.—A rather pointed story is told of Senator Blackburn, of Kentucky, and the late Senator Beck, which we give without varnish.

Upon one occasion it was necessary to test some old Bourbon whiskey before shipping the Simon Pure to a fastidious customer. The anxious dealer bethought him of these two great men, who were universally admitted to be connoisseurs in the article, and begged their indulgence in the matter of tasting the liquor. Blackburn swallowed a sip, smacked his lips, looked a little bit critical, tried it again, and then said, "It is fair,—very fair,—but," again smacking his lips, "It seems to me I taste iron in it." The dealer looked discouraged.

Beck went through the same process of tasting and trying, at last exclaiming, "That's good,—very good,—but I think I detect a taste of leather."

The dealers face fell. But, feeling sure he had a superior article, he investigated. After diligent search, he found a *carpet-tack with a leather cap* in the bottom of the cask.—*Harper's Magazine.*

His Offspring.

"My pigmy counterpart," the poet wrote
Of his dear child, the darling of his heart;
Then longed to clutch the stupid printer's throat

That set it up—"My pig my counterpart."—*Harper's Weekly.*

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SATURDAY, SEPTEMBER 30, 1893.

EDITORIAL.

THE DOCTOR AND THE COOK.

It is the popular belief that the relation between the physician and the cook is only that the former profits by the work of the latter. And in truth the cook has been a stay to the physician—an inexhaustible source of work for the medical man.

That medicine has become the science of the prevention of disease rather than the cure of it, is true despite weary iteration. Likewise is it true that the intelligent application of dietetic and hygienic measures is supplanting the empirical use of drugs. More and more is the attention of the medical profession given to removing the predisposing as well as the exciting causes of disease, anticipating rather than awaiting the actual presence of sickness. Greater dependence is placed upon fortifying and reinforcing the citadel threatened than upon trusting to the explosion of some hidden mine to rout the enemy in actual engagement. This tendency of modern medicine is the natural outcome of appropriating the advanced results of collateral sciences and making practical use of them in the interests of diseased humanity.

Medical students are prone to regard the time spent in the study and the laboratory on such subjects as physiology or chemistry, as being out of proportion to the benefit to be derived when the opportunity comes to put to practical application the lessons learned as students.

This objection appears pertinent, and even logical, so long as there obtains that mis-begotten product of ignorance and superstition, the belief that treatment consists principally in the application of drugs, and that diagnosis means the selection of a proper remedy.

That the student mind does not appreciate the great importance and mutual dependence of his preparatory studies, is more the fault of his teachers than of himself. He pursues his various studies as separate and distinct branches of science. He has a vague impression that these different branches bear more or less on the general practice of medicine. Just how he cannot at the time understand, and he is left to his own resources to find out. The average medical student, especially if he has received no training preliminary to his professional education, is not capable

of judiciously selecting and assimilating that which is valuable and necessary, from the heterogeneous chunks of information hurled at his devoted head during his attendance upon two or more full courses of lectures in a medical school.

It follows that he gives his attention to what he regards as the most important studies, to the neglect of those whose value is not evident to him, and not until he has graduated and, having survived the inevitable attack of macrocephalus, learned how utterly inefficient has been his preparatory training, does he appreciate the importance of the branches neglected. How could it be otherwise when the great one from his chair of Practice, delivers an oracle concerning some disease—its etiology, pathology, symptomatology, diagnosis, prognosis and treatment—all dogmatically and without an anatomical, physiological or chemical reason or explanation in the whole extract from ancient authorities.

It is no easy matter to specify just what and how medicine should be taught, but, it is evident that there will be a great economy of time and energy when admission to the study of medicine can be gained only by demonstrating a thorough grounding in the elements of the collateral sciences. Surely the medical school is not the place for teaching elementary chemistry or botany or physiology or the like.

When the student comes ready to apply principles already learned, teachers will no longer be able to comfortably give kindergarten shows, but in order to survive will be compelled to strain every nerve to perform their true functions, namely the gathering, sifting, selecting and preparing, from all sources of modern medical thought, pabulum ready for digestion and assimilation by discriminating minds of earnest researchers. This may be an ideal condition, but the steady advancement of the standards of medical education gives much promise for the future.

Under existing conditions, the physician, painfully realizing his lacks and the necessity of unlearning much that he has been taught, seeks information from all available sources and thereby acquires knowledge. This acquired, he endeavors to put it to practical use. Herein is wisdom.

The subject of food and its proper application is now assuming imposing importance. Familiar with the physiological processes of tissue building and waste, the whole subject of nutrition is opened up for study. This brings into play chemical as well as physiological wisdom—that is knowledge applied. But to obtain the desired ends it is not sufficient to know only the general character of the required foods. The physician must know not only what food stuffs will answer the requirements, but he must know how such food stuffs are to be prepared to work efficiently. This carries with it some knowledge of the kitchen for the simple reason that cooking involves processes of chemical change which may make or destroy entirely the value of the food stuffs.

In sooth, the physician is expected to know all of some things and some of all things. The physician knows it is not sufficient to give the very vaguest instructions as to what a patient may or may not eat, and trust to the ordinary kitchen mechanic to produce the desired results. He must, if necessary, be able to give for the preparation of food directions as specific as he gives the pharmacist for the preparation of medicine. This does not necessarily mean that every physician must qualify as a *chef*. It will be sufficient for practical purposes, if every physician will study the food stuffs in common use in the locality in which his work lies, and learn so that he can teach the modes of preparation by which the nutritive values of the various food stuffs may be developed.

The physician in the kitchen is no longer a joke.

TRANSLATIONS.

PEPSIN AND THE FERMENT LAB; ESTIMATION OF THE DIGESTIVE POWER OF GASTRIC FLUID; ARTIFICIAL DIGESTION.

Bouveret (*Gaz. Med. de Paris*, June 3, 1893) remarks that the gastric juice contains two ferments to which it owes its digestive activity, pepsin and the ferment lab or the ferment of rennet. The quantity and the quality of these ferments may be modified in pathologic cases, and it is important to recognize these modifications. There are no rigorous methods, however, by which these researches may be made. The pepsin is secreted in the gastric glands, probably by the principal cells, as the substance pepsinogen, the propepsin of Schiff, which as yet does not possess the property of digesting albumin. This property is communicated to it by the acids especially by hydrochloric acid, which appears to be of all the acids the one which separates from pepsinogen the most rapidly and the most completely the active ferment, pepsin. It is rare that propepsin is entirely absent, even in cases of extensive and grave lesions of the stomach, and the variations of the activity of the pathologic gastric fluids depends upon the variations in the acid element. It is generally admitted that a proportion of hydrochloric acid of 2.5 parts to 1000 is that which most favors the action of pepsin upon albumin, in other words, it is that solution of hydrochloric acid which, with a certain quantity of propepsin, appears to separate the greatest quantity of pepsin. Gastric fluids very rich in hydrochloric acid are not always those which digest the best.

Langley has discovered a means of distinguishing the substance pepsinogen from pepsin; the carbonate of soda destroys this ferment while it is without action upon propepsin. In the stomach mucosa of an animal recently killed, pork for example, there are coexistent propepsin and pepsin which must be separated by appropriate solvents; on heating the mucosa with water both of these substances may be extracted, while glycerin will dissolve only the pepsin. In the gastric fluids the presence of pepsin is usually determined and the degree of activity is approximately estimated. Two conditions may exist:

1. The fluid contains free HCl; 2. The fluid does not contain free HCl. Pepsin always accompanies HCl. It may be, however, more or less active, and the simplest way of appreciating this activity consists in submitting the filtered gastric fluid to the test of artificial digestion. For this purpose the same quantity of the gastric juice should be employed, for example, 10 to 20 centimeters. To this is added some albuminoid substance to digest such as the boiled white of egg, fibrin or the albumen of serum. The white of egg is generally preferred, because it is the most readily procured. According to the researches of Jaworski three hours are required to digest, at the temperature of 40° C., a fragment of coagulated white of egg of 5 centigrammes, placed in 25 cubic centimeters of gastric fluid of normal composition. An hour and a half will digest the same weight of fibrin and the dissolution of the albumin of serum is still more rapid. The method of dilution of Brucke permits the comparative estimation of the quantity of pepsin contained in different gastric fluids.

In the second case, *i.e.*, when the gastric fluid does not contain free HCl, the reaction of Gunzburg is negative. This fluid may be neutral. If albumin should be digested by such a fluid it is due to the accidental admixture of some pancreatic juice with the gastric juice, for a *neutral gastric juice that does not contain pancreatic juice will not digest albumin*. An acid gastric juice containing HCl will not digest albumin unless a part of this acid is in a free state. It is very interesting to search for the presence of propepsin in gastric juice deprived of HCl. Complete absence of this propepsin is very rare, but it is a sign of great value, and indicates, if it is constant, an advanced if not a complete destruction of the glands of the gastric mucous membrane.

Labzymogen and the ferment lab. We know to-day that the coagulation of milk is due to a special ferment, the ferment of rennet secreted by the glands of the stomach. Recognized by Payen, this fer-

ment has been completely studied by Hammarsten. Since then, it is generally designated under the name of the ferment lab or lab-ferment. As in pepsin, the lab is preceded by a proenzyme, the labzymogen from which it is separated by the acid, especially by hydrochloric acid; in some way in gastric fluids there is ordinarily a certain parallelism between this acid and the ferment of rennet. Labzymogen resists the action of alkalies, which even in very feeble dose, destroy the lab. The influence of lab upon milk is independent of the acids and of the pepsin. Selmi has shown that the lab suffices to produce a coagulation of milk in the presence of lactic acid and Hammarsten has separated pepsin from the ferment lab. Moreover, these two ferments do not act exactly under the same conditions; there is needed an acid medium for pepsin to digest albumin, while, lab, also active in an acid fluid, coagulates milk very well in an entirely neutral medium. It is nevertheless probable that the two ferments are secreted by the same glandular elements. Under the influence of neutralized gastric juice milk coagulates in a few minutes. The coag-

ulum, at first voluminous, retracts little by little, and permits the serum to exude; This retraction takes place slowly, the lab passes out in the serum; in truth, the serum is capable of coagulating a new quantity of milk. The casein thus precipitated is slightly soluble in acids and weak alkalies. The reaction of the medium is not modified during the phenomenon of coagulation; the liquid remains neutral. The coagulation of milk by acids does not present the same characteristics. The temperature of 34° to 40° C. is most favorable to the action of lab. At 70° C. the lab is destroyed but not the labzymogen. The determination of lab may be qualitative or quantitative, and two conditions exist, as in the case of pepsin, according as to whether the gastric juice contains free HCl or not. In the former case neutralize exactly 10 cubic cm. of this liquid, and add one equal quantity of fresh or boiled milk preferably the latter (Boas), the mixture taking place at a temperature of 38° C. In ten or fifteen minutes, if lab be present, coagulation is completed.

THE ETIOLOGY OF THE PRIMARY CARCINOMA OF THE GALL BLADDER.

Dr. F. Siegert, Geneva, (*Virchow's Archiv*, 1893) says: The question, is carcinoma of the gall bladder the cause or the result of the cholelithiasis which is so frequently observed with this disease. This is answered by the clinicians, as a rule, that the changes found in the gall bladder due to the presence of carcinoma, together with the failure of contraction and the abnormal secretion or formation of free bodies, owing to the degeneration of the tumor, all will aid in the production of gall stones.

The proof of this latter view was not generally acknowledged. Clinically the theory was that first cholelithiasis was present and that later the tumor formed in the walls of the gall bladder; pathologico-anatomically it was the fact that in this or that case the size of the gall stone present was in direct relation to the age or size of the carcinoma.

A third method is described by Siegert;

for instance, if the carcinoma is the cause of cholelithiasis, it would become absolutely necessary that gall stones should form with equal rapidity in primary or secondary carcinoma of the gall cyst.

The author has studied the literature of this subject carefully, and has collected a number of cases which have led him to the following result. The primary carcinoma of the gall bladder was found, 15 per cent. in males and 83 per cent. in females (2 were doubtful, since their description in literature was somewhat vague). Of 95 per cent. of gall stones, in 3 per cent. there was no primary carcinoma and in 2 per cent. it was doubtful. On the other hand there were found of secondary growths 77 per cent. in males and 23 per cent. in females; of these there were in from 15 to 16 per cent. gall stones present, and in 84 to 85 per cent. none.

Through these facts we have a certain amount of proof that secondary carcinoma of the gall bladder does not always of a necessity produce cholelithiasis. Should this occur in the secondary form occasionally, it may be just as much due to a possible previous formation of stone.

In primary carcinoma gall stones are found almost without exception while in the secondary form only exceptionally. For this reason the author thinks that the formation of the stones in the primary carcinoma are not the result, but may be the cause of the same (stones were found

in cases in which macroscopically a carcinomatous change of the gall bladder could not be proven, reference case 7 of the original.)

The primary carcinoma is found 5 to 6 times more often in women than in men; the cause is supposed to be a mechanical one, namely, tight lacing. The secondary form, however, occurs more frequently in the male, which can be explained by the fact that the primary seat of the carcinoma is more often found in the digestive tract, which is not the case in the female.

CONTRIBUTIONS TO THE OPERATIVE TREATMENT OF CONGENITAL HIP-JOINT DISLOCATION.

Dr. Hoffa, Wurzburg, (*Munchn. Med. Wehnschr.*, 1893) reports the result of cases which he had operated upon and described 3 years ago. The operation consists in the reposition of the dislocated head of the femur into the newly made, or frequently present, acetabulum. The author has, up to date, performed this operation 26 times. His experience has taught him that it should be done early, before the muscles attached to the pelvis and the thigh become contracted, otherwise it may become necessary to relieve these contractions. The theories differ somewhat about the success of this operation in congenital dislocation of the hip. For instance, the supposition that in most cases there is an absence of the acetabulum, is not advocated by the author, since close observation will always disclose a flattened space where the cavity should be. Even if not quite plain one can be readily formed artificially.

In order to perform this operation it becomes necessary to increase the depth of the old cavity, care being taken that the margins of this new formed acetabulum remain sharp. This will favor the normal position of the head of the femur, and is more readily done in the cases of congenital dislocation of the femur, since the region of the acetabulum forms the thickest portion of the entire pelvis. The head and neck of the femur present generally no difficulty after once having been replaced.

The author gives further new instructions about the technique of the opera-

tion and then presents the results of his operations. The operation will do away with the limping and lordosis of the one side; if the dislocation is on both sides, the results are equally good.

There is one point to remember in the one sided luxation, and that is, that the operation will not entirely remove the probable shortening of the extremity, since during the time before treatment it has become somewhat diseased.

Without operation in the orthopædic treatment such good results are never obtained. This is amply shown in the decidedly hypertrophied ligamentures which becomes inclosed between the head of the femur and the pelvis.

AN ATTORNEY'S SPEECH.—A colored attorney practicing in a court not a thousand miles from Richmond, Va., animadverting strongly upon the testimony of an adverse witness, used the following somewhat remarkable language:

"Gentermens ob de jury, yo dun heard all dat bal-haded conterband dun said. But, gentermens, he didn' tell de trufe. Ef he had er ben swore lak he would er ben swore thirty yeahs ago, ef he had er ben tole that unless'n he told de trufe his ears would er ben cut off smack up ter his hade, he would er told de trufe. But stidder doin' dat he kim heah an frejerdis dis jury gin the prisner at de bah, dat' ignunt, discomposed, and eluded man."—*The Green Bag*.

ABSTRACTS.

WHEN CATARACT IS READY FOR OPERATIVE TREATMENT.

Dr. Edward Jackson, of Philadelphia, in a paper read before the Pennsylvania State Medical Society, discusses this subject. He says:—

In former papers read before this Society, I have insisted on the importance of completeness in the early diagnosis of cataract. At a later stage, the important point in diagnosis is to determine when the cataract is ready, and ought to be removed. This determination rests upon the recognition of the so-called maturity of the cataract. This maturity may be considered from two points of view—the condition of the cataract as to the interruption of vision that it causes, which might be termed its *visual maturity*, and, second, its condition with reference its *surgical maturity* to easy and—complete removal.

The amount of interference with vision that cataract causes even when this has reached its maximum for the individual cases, varies greatly. In some cases this interference is not very great, even after many years of continuance of the opacity, and with very little probability of any further increase of interference, however long the patient may live. With this condition too, of slight interference with vision, the cataract may be surgically mature. In another case the opacity may reduce vision to mere perception of light, although the cataract is far from surgical maturity.

The amount of impairment of vision that will justify or demand the extraction of a so-called senile cataract will vary with the circumstances and occupation of the patient and the probable future course of the disease if left to itself. After cataract extraction, vision equal to 1-10th as suggested by Graefe, has been looked upon as a perfect result; a higher standard of vision has been proposed in this connection, as by Schweigger, who suggested 1-6th. We can, in any case of cataract extraction, except that the result of operation will be at least this good, with the possibility of being better. Hence, when vision has fallen this low, and the patient's occupation demands the most perfect vis-

ion, so that such an impairment is for purpose of labor, practical blindness, we may regard the visual maturity as warranting a resort to operation.

Visual maturity depends, of course, wholly on the amount of opacity in that portion of the lens in a line with the pupil, either in the nucleus or cortex. Surgical maturity depends rather in the alteration that have occurred in the portion of the lens lying in contact with the capsule, quite irrespective of any alteration in the nuclear part of the lens.

The surgically mature lens is in better condition for extraction, first, because the cortical substance is less adherent to the lens capsule, and, second, because the opacity of this cortical substance enables the surgeon to determine when it has been completely removed. The opacity of the nucleus is less important, because in senile cataract this comes out as one mass with no risk of a portion being left behind. It is possible for a clear lens to be surgically mature, as in the case of old persons, where the whole lens has become firm and would come out as nucleus. But such surgical maturity alone would not justify removal.

After the lens has undergone degenerative changes, and reached the period of surgical maturity, these degenerative changes generally continue and in time make the cataract less favorable for removal—it becomes hyper-mature. Hyper-mature cataract may present some fluid portions, but generally presents some portions that are harder and more brittle than any part of a recently mature cataract, if not actually calcareous. A lens in such condition becomes usually a more noticeable deformity, by reason of the white color that it gives the pupil, and is liable to irritate the adjoining iris, and make an irritable eye, and may give rise to sympathetic irritation of the other eye. It is, therefore, best to remove a cataract as soon as it becomes surgically mature.

From what has been said, it will clearly appear that there are two factors to be considered in determining the time for

cataract operation. First, the interference with vision, which will fix the time that such operation is desirable; and, second the conditions which influence the ease of complete removal, which will determine the time when the operation can be performed with the greatest ease and prospect of success.

So long as a patient preserves vision in one eye, the impairment of vision in the other will have little weight in determining the time of operation, because, even if a perfect visual result could be obtained by operation, the difference in refraction of the two eyes would leave binocular vision still impossible. When, however, the power of vision of the second eye becomes so far impaired as to cause interference with, or complete suspension of the customary occupation, the indication of visual maturity is present.

The question will then arise, Is it necessary or best to wait for the surgical maturity of the more advanced cataract? In former years this was always a very serious question and generally to be decided in the affirmative. Although a long period of comparative or complete blindness was thus entailed, there seemed to be no other way to give the patient a good chance for ultimate relief. The gravity of this period of waiting, the loss of time it entails on persons whose prospect of life is at best comparatively short, the reduction of many from self-support to dependence, and the unfavorable influence exerted on the general health of the individual by a period of idleness and comparative helplessness, have stimulated surgeons to seek for methods by which it might be abridged.

The method of rendering the lens opaque by puncturing with a needle as is done in cataracts for young people, has, from time to time, been tried in senile cataract, but has not been found safe or satisfactory.

An operation for the purpose of hastening surgical maturity that has gained general recognition by the profession is that of Fœrster, who removed a portion of the iris, and by trituration of the cornea, and through it the lens lying in contact with it, immediately after the iridectomy, secured the early surgical maturity of the cataract. The trituration with the iridectomy, however, is itself quite a formidable operation; and its results were

extremely uncertain, although possibly it is capable of development into a more reliable operation.

But with the reintroduction of extraction without iridectomy, it has fallen further into disfavor or neglect.

Dr. Bettman, of Chicago, has however, proposed an operation which he calls direct operation, in which he taps the anterior chamber and introduces a speculum into a direct contact with the lens, and performs a similar stroking of its surface.

Dr. White, of Richmond, acting on suggestion of Dr. Pooley of New York, has also modified Fœrster's operation omitting the iridectomy. Simply by tapping the anterior chamber and drawing off the aqueous humor, so that the lens falls in contact with the posterior surface of the cornea, the same effect of artificial ripening of the cataract is produced.

These operations, of which the last is probably the most valuable, furnish the means of securing surgical maturity as soon as a cataract causes sufficient impairment of vision to constitute an indication for its removal. Then, too, the advances made in the operation of extraction, enable us now to extract cataracts before they are surgically mature with great safety. For this purpose, the washing out of the anterior chamber, as the last step of the operation, is a most important advance. One of the best means of doing this, and the one I have employed, is that described by Dr. Lippincott at the meeting of this Society in 1890, at Pittsburgh.

The danger of inflammation after the extraction of an immature cataract seems to be through the leaving of portions of lens substance in the anterior chamber. This may be entirely prevented by the washing. There is also the risk of not entirely removing the cortex from within the capsule. This, however, does not endanger the safety of the eye, but merely necessitates the doing of an operation for secondary cataract and detracts from the brilliancy and impressiveness of the immediate result.

From what has been said, therefore, it is evident that we can now with great safety, either by preliminary ripening, or by extraction of a cataract not surgically mature, as may best suit the particular case proceed to the operative treatment of se-

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nile cataract, so soon as the visual impairment becomes an indication for operation.

In deciding when the impairment of vision is sufficient to warrant any operation, it should be borne in mind, however, that brilliant as are the results of cataract extraction, the removal of the lens entails the necessity of wearing cataract glasses, which are often so annoying and unsatisfactory, and present such difficulty to the elderly patient to become accustomed to the distortion of the images they cause, that, as Landolt has said, the patient is often inclined to complain more of his glasses than of his cataract. Hence, aside from the small risks of the operation, the certainty that the patient will experience serious annoyance from the necessity of using his glasses, should make us hesitate about the abstraction of cataract, unless the improvement of vision to be secured by it will be marked and unmistakable.

While it may be best for the patient to prevent a long period of enforced idleness and blindness, at least some slight experience of such a condition will have a beneficial influence in lessening his annoyance at the difficulty of seeing under the conditions of aphakia.

In the cataract of young people, whether congenital or traumatic, the indication for removal is also the probability of improved vision. Young people commonly have less difficulty in becoming accustomed to cataract glasses, and will, in a short time, become entirely satisfied with them, especially if they have not known distinct vision prior to the removal of the cataract. On the other hand, if the opacity of the lens, still permits a considerable amount of vision, the young person possessing the power of accommodation, has an advantage that the cataract glass cannot give, and which should be considered before deciding on the removal of the lens.

In many lenses, however, that present partial cataract, this power of accommodation is much less than in normal eyes of the same age, and, often can only be exercised or is liable to be exercised in such a way as to cause eye strain and consequent disease, and permanent danger to the other tissues of the eye.

Then, in any doubtful case, there is the additional reason for early operation, in that the younger the child, the simpler the process of removal. Up to about the

age of 15, we can expect the lens to be removed by absorption, after one or more needlings, a slower, but safer and simpler operation than extraction, which will probably be necessary at a later date.

In the case of capsular or secondary cataract, the surgical indication, as well as the visual, is for the earliest possible operation. Such membranes always tend to become more tough and resisting the longer they are left, so that as soon as the condition of the eye warrants operative interference, and it is clear that secondary cataract or thickening of the lens capsule will have to be dealt with, the operation should be performed. Those cases are rather to be regarded as fortunate in which such an operation is done to secure the best visual acuteness within the first few weeks after cataract extraction.

With reference to all forms of operative treatment of cataract, the most serious contra-indication to operation, is any impairment of the general health that is likely to prevent or delay normal healing. In looking back over my own experience, I cannot recall any case of an eye lost or vision damaged after cataract operation, in which there was not some unfavorable condition of the patient's general nutrition. This point has perhaps, too often been lost sight of in this era of improved surgical methods, but it is certainly one of the very greatest importance. As a preliminary to any operation, the patient should be brought into the best possible condition of general physical health.

But it must not, in any case be supposed that even serious organic disease will necessarily lead to an unfavorable result, or that in the presence of such disease, it is not justifiable to take considerable risks for the sake of giving the patient sight during what life may remain. Perfectly satisfactory healing occurs in advanced diabetes, or Bright's disease, or in the presence of such a serious local disease as chronic catarrhal conjunctivitis.

SUMMARY. In conclusion, the points to which I wish to direct attention, are

First.—That in considering the question of operation on senile cataract, we must recognize visual maturity and surgical maturity as distinct conditions.

Second.—That it is sometimes best to have surgical maturity before proceeding to the extraction of cataract, but

Third.—Surgical maturity may be obtained by preliminary operation whenever it is desirable.

Fourth.—The time for extraction will then be determined rather by the visual maturity; not, generally of the cataract to be extracted, but of the cataract in the eye that retains the better vision.

Fifth.—That if necessary, for visual and personal reasons, it is proper to extract a cataract surgically immature.

Sixth.—In young people where some

visual power remains, the value of the power of accommodation must be considered in determining the question of operation.

Seventh.—If in young persons, the removal of the lens is deemed advisable, it should be done as early as possible.

Eighth.—In all cases, the condition of the patient's general health should be carefully considered, and given the greatest weight in determining the time for a cataract operation.

A CASE OF CHRONIC GLANDERS TERMINATING FATALLY IN AN ACUTE EXACERBATION.

The authors of this paper, Dr. Hallopeau and Jeanselme (*Annal de Dermatol et de Syph.*), 1893, gives at the outset a cursory review of glanders occurring in man.

Elliotson and Rayer were the first to establish direct infection. Alibert was apparently ignorant of its occurrence in man; English, American and German dermatologists allude to its manifestations, but with few exceptions have had no personal experience with the disease. The pathological and clinical aspects hitherto have been only lightly touched upon, and therefore the authors have given a full clinical, pathological and bacteriological account of the disease.

The patient, set. 30, a carter, was admitted to the Saint Louis Hospital in April, 1890, and gave the following history:—He had been a carter for the last six years. Some few months after having followed this occupation, one of his horses was taken ill, evidently with glanders, and in the course of three months had to be killed. It was then that the patient first complained of his symptoms. He suffered from general malaise, headache, periodic febrile attacks, pains in the joints, which were neither swollen nor red, and abundant nasal secretion. He was admitted to the hospital at Chalons-sur-Saône, and there he had several abscesses in various regions of the body; some of these healed spontaneously, others in spite of various applications remained open, discharging viscid yellow fluid. Not getting any better after being a year in the hospital, he came to Paris and was admitted to the Saint Louis

Hospital. Again various applications were tried (carbolic acid, boric acid, tincture of iodine, iodoform, aromatic spirits), but without result. Finally, under an anæsthetic, the thermo-cantery was vigorously applied, and in the course of a fortnight the patient left considering himself cured. In fact he was able to work for the next three years without any fresh manifestation of glanders. In 1889 dwellings again broke out, unconnected with the scars of the former abscesses, and in April he again came to Saint Louis Hospital.

Status presens.—He complained of headache, pains in the ears and slight deafness. There was ulceration of the palate immediately behind the median incisors. He denied having ever had syphilis, but he was placed on an iodo-mercurial course, and mouth-washes of perchloride and chlorate of potassium were used alternately. No improvement followed; at the end of six weeks the ulceration implicated the gums and upper lip, and anti-syphilitic treatment was stopped.

The labial and gingival ulceration healed, but a sinus persisted in the palate. During the next six months chronic inflammation of the right lachrymal sac supervened, and in October an abscess, the size of an egg, developed in the right flank, opening and healing spontaneously within three weeks.

The upper lip again became swollen and ulcerated, secreting a gummy yellowish fluid. The contiguous gum was spongy, pus exuded at the necks of the incisor teeth, which became loose and discolored. The palatal ulceration exten-

ded as far as the velum palati. There was an ulcer at the neck of the uvula. The remainder of the buccal and pharyngeal mucosa was unaffected. The larynx was sound, and the voice, as in the past, was quite clear. The nasal fossæ were profoundly altered. The secretion was very abundant, yellowish, viscid, and streaked with blood; there was no ozæna. On examination the floor was swollen, and showed distinct ulceration, especially the mucosa of the right nostril, and a sinus led down to bare bone. The septum nasale was perforated, permitting the passage of a probe from one nostril into the other.

Mercurial treatment was again carried out, but in spite of prophylaxis, it aggravated the buccal and nasal ulcerations, and was consequently stopped. The thermocautery was now used with excellent effect: unfortunately, owing to the exquisite pain that persisted for some days, the labial ulcers could not be canterized as effectually as the others. The general characters of the ulcerative process were as follows:

The ulcers presented a punched-out aspect. The margin was sinuous in some places, dentate in others, but everywhere undermined. The surface was anfractuous, granular, covered with a yellowish viscid secretion through which yellow spots like pustules cropped out. The base was not indurated, and the surrounding area, although swollen, did not present the fibrous thickening of an epitheliomatous ulcer.

In December, 1889, a swelling of the size of a nut appeared in the right canine fossa; this was opened by the canter, which gave vent to a yellowish viscid secretion. The patient suffered greatly from insomnia and sharp shooting pains in the head. During the following five months his condition deteriorated, the right side of his face was inflamed and showed scattered pustules of the size of a hemp-seed. The nostrils were plugged with foetid crusts; the palpebral conjunctivæ were bathed with a sero-purulent discharge; the ocular conjunctivæ remained unaffected; and the right eye was much the worse of the two. The ulceration of the upper lip had destroyed this completely, laying bare the gum, and in April, 1890, the lower lip was attacked.

Marasmus now set in; constant hectic,

uncontrollable diarrhœa, foetid dejecta, slight jaundice, and albuminuria. Ascites supervened, and the patient sank May 21, 1890.

Three periods may be noted in the above case of glanders.

1. The increased nasal secretion and multiple abscess formation running a peculiar course. This period ended in freedom from any symptom for three years.

2. A second series of abscesses, accompanied by ulceration of the nasal fossæ, hard palate and lips.

3. An acute exacerbation of glanders with exitus lethalis. The diagnosis was surrounded with difficulties, and it was only after the signal failure of mercurial treatment on the two occasions, the absence of any signs of tuberculosis and of tubercle bacilli in the secretions, and careful consideration of the patient's history and occupation, that suspicion was aroused of its being a case of equinia.

Drs. Hallopeau and Jeanselme, by cultures and inoculation experiments on guinea-pigs and on an ass, proved conclusively that their patient was suffering from glanders.

The organisms are short rectilinear or slightly curved rods, thinner at their ends than in the middle, thicker than but not quite so long as tubercle bacilli. The equinia bacilli were never found in masses, but either solitary or in groups of two in the neighborhood of aggregations of leucocytes.

As regards the cultures, these when sown on potato presented an amber color on the fourth day, becoming reddish-brown later on. In bouillon fine spiral filaments appeared the following day after insemination.

In the experiments on guinea-pigs, all of which succumbed to equinia, it was found that in males, when the peritoneum was injected with the virus, suppuration of the tunica vaginalis testis invariably followed, which was not always the case when the skin was the site of inoculation.

The ass showed signs of equinia after being inoculated with cultures derived from potato-média.

The authors draw the following conclusions from their study of the above case:—

1. Chronic glanders may last as long as six years, and this is not exceptional.

2. The disease may remain quiescent and, contrary to Tardien's observation, as long as three years.

3. Glanders should be suspected after a series of multiple abscesses—subcutaneous or intra-muscular—and in the presence of ulceration of the nasal fossæ, of the buccal mucosa, of the velum palati, and painful swelling of the lacrymal sacs with purulent discharge from the nostrils.

4. The swellings—farcy buds—may discharge and heal spontaneously: the latter is rare. Sinuses that persist would seem to preserve indefinitely the property of transmitting equinia—at least inoculation experiments prove this.

5. The specific ulceration has a predilection for the buccal and nasal mucosæ: in the above case it attacked the lips—the first on record.

6. These ulcers resulted from the breaking down of gummy swellings; they were not consecutive to abscesses, as Tardie had stated, and no suppuration occurred in the tissues of the lips.

7. They differed from syphilitic ulcers, in presenting irregular undermined margins, anfractuons bases studded with yellowish prominences, abundant viscid secretion—farcy oil—and in their resistance to anti-syphilitic treatment. Their course is phagedenic in nature, and hideous deformity often results.

8. The acute fatal exacerbation may start from the nasal fossæ spreading along the nasal ducts, analogous to severe erysipelas.

9. From erysipelas glanders differs in the absence of glandular enlargement, and in the presence of profound destruction of tissues accompanied by formation of pustules.

10. The acute attack may last as long as forty days.

11. The secretions of the labial and nasal ulcers, and especially that of the conjunctiva, are exceedingly virulent. The urine of the patient during the acute exacerbation of equinia gave negative results on inoculation.

12. In all the secretions—both of the patient and of the animals—the specific glanders bacillus was present, either alone or with other micro-organisms (staphylococci).

13. To facilitate diagnosis, cultivations should be made on potatoes, which assume

in a few days a reddish-brown color. Peritoneal inoculations in male guinea-pigs are followed in forty-eight hours by characteristic suppuration of the tunica vaginalis testis.

14. The only efficacious treatment is cauterization with Paquelin's cantery, systematically and thoroughly carried out.—*The British Jour. Dermatology.*

THE SERVANT WAS HORRIFIED.—Dr. S. had last winter a newly-arrived Hibernian for a servant; he had also recently purchased a pair of porpoise-leather boots. His wife, attracted by the novelty of the new foot-wear, asked the doctor in the presence of the servant what they were made of, to which he responded "Porpoise-hide."

Shortly after the lady from the Emerald Isle interviewed Mrs. S., and announced her intention of "laving whin me week is up." Mrs. S., somewhat surprised, asked the disturbed domestic the reason for her announced departure, to which Bridget responded, with a horrified air,—

"Yer husband is a docther, mum, an' I've heard them docthers do be cuttin' up people, an' didn't I hear um, wid me own ears, say that the boots of him were made of pauper's hide? It's me own ould father that died in the poor-house, an' I wouldn't be sarvin' a haythen that uses the skin of the poor to cover his dirty feet wid."—*Boston Commercial Bulletin.*

UNPREJUDICED ADVICE.—A Western Senator tells a story of a man travelling in a parlor-car between Omaha and Denver who fell asleep and, as *Punch* would say, "snored profusely from the nose," so that everyone in the coach was seriously annoyed. Presently, says the *St. Paul Dispatch*, an old gentleman approached the sleeper, and, shaking him, brought him out of his slumber with a start,

"What's the matter?" he exclaimed.

"Why, your snoring is annoying every one in the car," said the old gentleman, kindly.

"How do you know I'm snoring?"

"Why, we can't help but hear it."

"Well, don't believe all you hear," replied the stranger, and went to sleep again.—*Lippincotts.*

CURRENT LITERATURE REVIEWED.

THE ANNALS OF OPHTHALMOLOGY AND OTOTOLOGY

for July commences with a paper by Edward Jackson, M. D., on

Method in the use of Test Lenses,

the principal merit of which is that the writer emphasizes the necessity of adopting "method" in determining the refraction of the eye, especially in the use of the test lenses. His "own plan is, after ophthalmoscopic examination, which gives an approximation to the refraction, to employ the ophthalmometer, and then the shadow test. In this way the correcting lens is determined, usually within a limit of 0.500 of inaccuracy. The trial with test-lenses is then begun by placing this approximate correction before the eye, finding what vision it gives, and then endeavoring to improve it."

This plan is excellent in theory, but it may be remarked, that the reverse order is often times adopted by other observers, unless opportunity is given for testing with lenses at a subsequent sitting, for not unfrequently the ophthalmoscopic, the ophthalmometric, and skiascopic examinations are in themselves so dazzling and exhausting to the patient, as to unfit him for a subsequent examination with lenses without considerable rest. Specialists as a rule are enthusiasts and when absorbed and interested in "a case" they are too often liable to forget the fact that the patient is becoming fatigued by a prolonged examination. Most patients are somewhat "nervous" when they come to the oculist for the first time to have their eyes examined, and what is familiar to him is altogether new and strange to them; so that a first examination has to be conducted with considerable tact, in order that the patient may feel himself at his ease, and not be wearied by the ordeal.

Dr. Jackson recommends that the "changes in the strength of the lenses should be made by the alternate placing and removing of a supplementary lens in front of the one already selected. These changes should always be sufficiently great to decidedly affect the distinctness of vision, being in different cases, and different stages of the test proportioned to the acuteness of vision obtained, and to the patient's powers of accurate observations. The principle of reversal of cylindrical lenses should be applied by alternately trying supplementary lenses of opposite kind, or turning the axis first in one, then in the opposite direction. It is essential from time to time to check the answer of the patient, as to his impressions, by requiring him to read aloud the letters on the test card."

This article is followed by one on

The Pernicious Influence of Albinism upon the Eye,

by George M. Gould, M. D., who has some very positive opinions about albinism. Whilst admitting that there is a mys-

tery surrounding its etiology, and the curious fact that perhaps only one or two members of a large family born of perfectly healthy parents, will be affected with albinism; he is very positive in asserting that the deficiency and dazzling of vision is principally dependant upon the lack of pigment in the iris, and that the symptoms usually found to accompany it are really the consequences of that same condition, and he cites several cases in support of this opinion. He says: "the pathological significance of albinism, lies, I believe, solely in the fact that the iris or diaphragm of the ocular camera is transparent, or so nearly so that it does not act as a true photographic or physiological diaphragm. From non-opacity or non-pigmentation of the iris follows the entire train of evil results that afflicts the albino, and from this slight cause alone. The combination photophobia, nystagmus, ametropia (often also insufficiency or strabismus), and amblyopia presents a union of four frightful ocular defects that leaves little to add of worse, but I wish to emphasize again my conviction that, each and several, these four things are directly or indirectly due to the etiological factor, a non-pigmented iris. A non-pigmented choroid and lid may exaggerate the evil."

Dr. Gould finds that proper correction of the ametropia lessens eye-strain, lessens photophobia, and increases the power of near range vision and he is hopeful that by employing London smoke coquilles having a round segment of say five-eighths of an inch in diameter excised therefrom directly in the line of the visual axes, and into the openings inserting transparent lenses with the patients' ametropic correction, the peripheral portions of the retina will be shaded, the image fixed accurately at the macula and the nystagmus prevented, with the necessarily resultant cure of the amblyopia.

A paper by Dr. Howard F. Hansell, on

Functional Exotropia,

adds fresh evidence as to the futility of tenotomy of the external recti in cases of functional exotropia with loss of converging power; and the advancement of the interni has also in his hands proved unsuccessful. He considers "the most satisfactory results are obtained from a combination of tenotomy of the externi with advancement of the interni, with the object of securing, immediately after the operation, and retaining for a considerable time, decided convergent squint."

An article on

The Toxic Amblyopias, their Symptoms, Varieties, Pathology and Treatment,

by Casey A. Wood, C. M., M. D., is a continuation of a previous contribution in Vol 1. It deals especially with Tobacco, Alcohol, and Alcohol-Tobacco Amblyopias, and gives a resume of the opinion of recent authors, as well as the results of Dr. Wood's own experience upon the subject. This paper concludes thus:

"When all the symptoms of central amblyopia, due to intoxicants are considered, it ought to be, and as a matter of fact is, easy to detect and differentiate these forms of ocular disease. Uhthoff, thus summarizes the points of *diagnosis between the retro-bulbar neuritis of tobacco and alcohol and that due to other causes as syphilis, disorders of menstruation, "cold," diabetes, etc.* 1. The central scotomata are almost invariably confined to red and green; it is rare to find even blue affected, and almost never yellow and white. 2. The scotomata and visual disturbances are bilateral. 3. Vision does not fall below $\frac{1}{16}$. 4. The form of the scotoma is that of an oval which usually includes and stretches from the fixation point to the blind spot and lies above the horizontal meridian. 5. The vision becomes *gradually* less. 6. The disease affects almost always men. 7. Of more than 40 years of age. 8. *Plain is noticed on extreme ocular movements in the essential retro-bulbar neuritis of women, but is invariably absent in the toxic form.*"

Dr. S. Lewis Ziegler, has a paper on

A Convenient Prism Scale.

After giving to Maddox the credit of first suggesting a "Prism Scale," and also referring to Prentice's *Prismometric Scale*, he describes his own "Prism Scale" which possesses both a horizontal scale in black, and a vertical scale in red. The prism unit is adjusted for a deviation of two centimeters at a distance of two meters, and the two scales are so joined that the angle of a resultant prism can be easily ascertained. The article, which is well illustrated, concludes with a convenient "Table of equivalent prisms with their resultants" and also a "Table of resultant prisms and their equivalents."

Dr. Black, of Denver, in a paper entitled *Operations upon the Eye for Cosmetic Effect*,

makes a stirring appeal to oculists not to postpone operations on the eye, which are purely of a cosmetic character. A divergent squint should not remain uncorrected or a cataract unremoved, because of hopelessness in restoring vision in an eye. A partial or complete leucoma of the cornea should be tattooed to improve the appearance of the eye, and a pterygium should be removed as early as possible, before serious and irreparable danger has resulted to the cornea.

THE VIRGINIA MEDICAL MONTHLY for September.

Dr. James Kerr presents the report of some of

The Surgical Work at the New Emergency Hospital

of Washington, D. C., during the past year.

In the treatment of wounds it may be said in general that in the emergency room it is antiseptic while in the operating room it is aseptic. In all cases, not already septic, the operations are conducted aseptically, except as far as the skin itself is concerned. Heat is used for sterilizing everything that goes into or near the wound, except the skin of the patient and the operator's hands, which

are prepared by scrubbing, alcoholic, carbolic, and sublimate dressings. The precaution is also added of a permanganate and oxalic acid bath for the operator's hands. Sponges are not used, but, in place of them, mops of gauze or cotton. Haemostasis is accomplished as far as possible by sponge pressure. Before closing a wound it is flushed with a sterilized salt solution. Silk and silkworm gut are used for sutures. In amputation wounds the author states that he has had no occasion to use any form of drain whatever.

The general management of head injuries comprises carrying out exactly absolute quietude in a darkened remote corner of the ward, with as noiseless surroundings as possible. Purgation and special attention to the condition of the bowels, warmth to the surface and cold to the head, keeping the patient, in all cases where the unconsciousness has been at all deep, several weeks under this treatment. The practice is to elevate in every case of depression with or without symptoms of compression, and explore in all severe head injuries where fracture is suspected. By exploring is meant reflecting the scalp at the site of injury. The author prefers the chisel to the trephine in operations on the skull. In nearly every case the bone was replaced. In one case of septic meningitis the replaced bone was removed and the process arrested by flushing, packing with iodoform gauze and subsequent drainage. Marked improvement speedily followed and the patient recovered. The author earnestly commends the procedure under similar circumstances, and would, from this experience, support the proposition to do a craniectomy in cases of meningitis other than traumatic. He believes that the rapid course and terrible mortality of intracranial inflammations is largely attributable to the unyielding character of the brain case, in relation to the important and delicate organ it contains; and while the cavities of the meninges cannot be treated wholly as the peritoneum can, if we can locate the focus of septic invasion, and as promptly relieve tension, give exit to inflammatory exudate, pack and drain with gauze, we can probably get the same satisfactory results as follow these procedures in the peritoneum and other serous cavities.

In one case of intra- and extra-peritoneal rupture of the bladder, associated with fracture of the pelvis and extravasation of urine into and behind the peritoneum, laparotomy was performed, the bladder stitched laterally to the front of the pelvis to wall off the ruptured part (as the rent itself could not be reached), and the wound treated by the open method by packing the pelvis behind the bladder with iodoform gauze, and draining the bladder and the prevesical space. The patient was threatened with peritonitis following the operation but recovered.

Dr. George Corrie contributes a paper on

Ammonii Chloridum as a Remedy in Cystitis.

The following are some of the conditions in which the drug has been given faithful trial,

with most satisfactory results in every instance:

Cystitis dependent upon stone in the bladder; stricture; hypertrophy of the prostate; deposits of urates, etc.; gonorrhoea (male and female).

Cystic irritation from uterine disease or menstrual disorders; malarial effects; masturbation; early pregnancy; simple urethritis (traumatic) in newly-married women.

Cystic and renal sequelæ of la grippe.

In the majority of instances the urine was rapidly cleared of bladder mucus, blood corpuscles, pus corpuscles, etc., the distressing symptoms disappeared, and in no case did the salt solution occasion any gastric or other disturbance. The salt is given in capsules, three or four times in the twenty-four hours, preferably when the stomach is somewhat empty, each dose to be followed immediately by half a goblet or a goblet of cold water.

The capsules should be filled shortly before being used as the salt dissolves the gelatine. No explanation of the mode of action of the remedy is given.

Dr. W. K. Gatewood in a paper on "The Modern Treatment of Sprained Ankle" reports a case rapidly cured by the use of continuous applications of hot water and hot fomentations followed by strapping with adhesive plaster.

Other papers in this month's issue are: "Treatment of Appendicitis" by Dr. John W. Dillard; "Practical Observations on the Formulas and Action of Certain Diuretics and Purgatives in the Treatment of Some Forms of Dropsy," by Dr. Joseph Jones; "Injuries to the Eye," by Dr. R. H. Chilton; "Mistakes in Diagnosis," by Dr. R. L. Payne; and "Notes on Sixteen Cases of Atypical (Mountain) Typhoid Fever," by Dr. John F. Woodward.

PERISCOPE.

MEDICINE.

Limited Importance of Albuminuria in the Diagnosis of Bright's Disease.

In a recent address delivered before the Academy of Medicine of Paris, Dieulafoy tried to prove that too much importance is given to albuminuria in establishing a diagnosis of Bright's disease and gauging its gravity, basing his opinion upon observation in sixty cases taken from his hospital wards, and duly classified.

In the first category were included six cases in which death followed all the major signs of uremia, after having presented most of the minor signs; no albumen, however, had been found at any time, although the post-mortem examination demonstrated the existence of characteristic lesions of Bright's disease.

In a second group he placed certain cases in which albumen was found at certain periods only, outside of which periods it was impossible to diagnose chronic nephritis by searching only for the pathognomonic symptom, albuminuria. Dieulafoy therefore concluded that this symptom had but little value in the diagnosis of Bright's disease. It should only serve to confirm the presence of the disease as corroborative evidence; for being far from trustworthy, it might otherwise lead to a diagnosis of Bright's disease in subjects having had albumen a long time without showing signs of ill health. To avoid having recourse to a symptom proven to be so untrustworthy, this illustrious observer proposes that one should make use of those "minor signs," for the most part unperceived generally, which he was the first to describe under that name in his works on the subject. These minor signs, according to him, serve to indicate the initiatory stage of Bright's disease, the malady itself being characterized by the major signs, such as dyspnoea, cephalalgia, convulsions. He describes, in turn, the

symptoms furnished by the sense of hearing, —the buzzing and whistling varieties of tinnitus so frequent in cases of Bright's disease; the strange sign that he designates as the "doigt mort" (dead finger), characterized by a sensation analogous to that produced by putting one's fingers into snow; itching, etc., etc. He also speaks of cryæsthesia, that sensation of feeling cold peculiar to victims of Bright's disease; slight epistaxis in the morning, and also the painful cramps in the legs which only cease on the patient's getting out of bed, are also symptoms to be noted.

Dieulafoy has always found these minor signs of use in the diagnosis of chronic nephritis, and had them controlled by measuring the degree of toxicity of the urine of patients; he always found a smaller degree of toxicity than is normal, this serving to prove that the substances to be eliminated by the kidneys remained in the system to gradually poison it.

As to treatment, Dieulafoy considers that milk diet is the only effective means at our disposal. He does not attach much importance to the variations in the quantity of albumen excreted while under the influence of this treatment, as the improvement—the cure, even, of certain patients—is shown by the disappearance of the minor signs, sometimes even by that of the major symptoms. This he has witnessed in two groups of patients where the two pathological conditions were associated,—Bright's disease and chlorosis on the one side, and Bright's disease and syphilis on the other.

He also examined into the matter in which Bright's disease is modified by being associated with gout, chlorosis, or kindred affections. Gout shows itself in the kidneys either by calculi or by nephritis. The kidneys of a gouty subject should therefore be well looked to, as nephritis of an arterial nature is apt to supervene. As to the prognosis, a distinction must be established, in a gouty subject, between the minor signs of Brightism and

albuminuria appearing by itself; in the latter case, it is simply a case of gouty albuminuric diabetes, without much gravity.—*Univ. Med. Jour.*

Cerebro-Spinal Meningitis.

F. Klemperer (*Berl. klin. Woch.*) reports three cases of this form of meningitis. Case 1. Woman, aged 18, both of whose parents had died of phthisis, had been ill for three or four days with pain in the head and giddiness. On admission there was stupor, restlessness, and great irregularity of the pulse. The abdomen was indrawn, the neck stiff, and the head slightly retracted. The next day there was vomiting, cutis anserina, and *tache cerebrale*. Two days later the stupor was marked, the pupils retracted sluggishly, and labial herpes was present. The pneumococcus was cultivated from the herpetic vesicles, but its virulence was shown experimentally to be slight. The next day the meningeal symptoms were more marked, and there was epistaxis. From this time the patient began to improve, and was discharged completely well about a month after admission. Case 2. Woman, aged 29, began to all four weeks before admission with pain in the joints, and, later, in the right side of the chest. Exploratory puncture here yielded clear fluid. On February 24th there was some stupor, headache, pain and stiffness in the neck, and a rise of temperature. February 25th. There was vomiting, restlessness, and tremulous movements in the face muscles. On February 27th the pulse was irregular and herpes appeared. Next day there was Cheyne-Stokes breathing. The fundus oculi, as in the preceding case, was healthy. Later the left pupil was less than the right, both reacting sluggishly. From March 10th there was slow improvement, ending in complete recovery. Case 3. A girl, aged 16, whose father had died of phthisis, became suddenly ill three days previously with fever, vomiting, and pain in the back. On admission she was apparently unconscious and very restless. There was great rigidity of the neck, clonic spasm in the left arm, and later, weakness in the right side. On the sixth day, herpes appeared, from which diplococci were obtained. She died on the eighth day, and pneumococci were cultivated from the meningeal exudation. There was no tubercle anywhere. In all three cases many things appeared in favor of meningeal tuberculosis. The author discusses the relation of labial herpes to herpes zoster, and he says that the identity is not yet established. He has investigated bacteriologically the fluid from fourteen recent and five older cases of labial herpes. He thinks that this herpes represents a special localization of the original disease, or that when it is the expression of a mixed or secondary infection it seems as though an ordinary and non-specific cause acts as the etiological or complicating factor. The author thinks that labial herpes justifies the diagnosis of a non-specific or so-called epidemic meningitis as against the tuberculous form. He admits that there is much that is hypo-

thetical in this idea, and that a single case of tuberculous meningitis with herpes would overthrow it, provided that a mixed infection was rigidly excluded. Herpes may accompany the suppurative meningitis of the tuberculous, but not pure meningeal tuberculosis. Recovery is more probable if the meningitis be of the simple kind and not tuberculous.—*Br. Med. Jour.*

The Staphylococcus in Osteomyelitis.

Bommers (*Deut. med. Woch.*) June 8th, 1893, has succeeded in cultivating the staphylococcus albus from the blood obtained with the usual precautions from the finger in a very acute case. Both bouillon and glycerine agar tubes showed abundant growth, and pure cultures were obtained. It is remarkable that in a case of the most acute osteomyelitis (acute necrosis) the experimentally but slightly virulent *S. pyogenes albus* should be present.

SURGERY.

Frequency of Sequestra in Tuberculosis of Large Joints; Treatment of Joint-Tuberculosis.

Riedel, of Jena, has written on the frequency of sequestra in tuberculosis of the large joints, with observations on the treatment of joint-tuberculosis. Tubercular foci in bones, when no sequestra are present, often heal spontaneously; but the presence of a sequestrum renders healing impossible, unless the sequestrum be removed; hence statistics throwing light on the frequency of sequestra are of the utmost importance. Riedel reports 314 cases of tuberculosis of the six large joints, in which the disease began in the capsule in 32 per cent. and in the bones in 68 per cent.; 67 per cent. of the latter presented sequestra, and in 33 per cent. sequestra were present. Hence, out of 314 cases 45.55 per cent. were devoid of sequestra. If to the above 34 cases of tubercular foci near the large joints are added, the total number is raised to 348, of which 48 per cent. had sequestra. As regards individual joints, in 88 cases of coxitis, 70 per cent. had sequestra; in 116 cases of tuberculosis of the knee-joint, 37 per cent.; in 39 cases of tuberculosis of the ankle, 38 per cent.; in 10 cases in which the shoulder-joint was affected, 50 per cent.; in 48 cases of disease of the elbow, 31 per cent.; in 13 cases of disease of the wrist, 15 per cent.

The tubercular process began more frequently in the bone than in the capsule, as is markedly shown in the hip-joint (84 per cent.). An interesting point relates to the frequency with which the disease begins in the different bones of a given joint. In the hip, for instance, the author determined that in 86 cases with sequestra the primary focus was in the acetabulum in 70 per cent., in the head and neck in 20 per cent., and in the head and acetabulum in 6 per cent., leaving 4 per cent. undetermined.

According to the foregoing figures, the best chances of recovery without operative treatment exist in tuberculosis of the elbow, followed by the knee, and then the ankle. The hip-joint, which is most often treated by conservative methods, offers the least chance of success; so that very few cases are permanently cured by injections, etc. In spite of these statistics, however, the operative treatment of the other joints gives such good results that Riedel would advise its continuance.

The author prefers to operate through longitudinal incisions, especially where cavities are left. These incisions are tamponed and not sutured. Any cross-incisions which may be necessary are united by catgut. The resulting scars are just as good as if the incisions had been closed, and healing in the depths of the wound takes place with greater rapidity and certainty. He speaks strongly against the tuberculin treatment.

In the following statistics from Achen only those cases are designated as cured which were discharged without fistulæ. The total number was 137. Of these 75 per cent. were cured; in 13 per cent. fistulæ remained; subsequent amputations were made in 3½ per cent., and 8½ per cent. died. In 49 resections of the hip-joint there resulted 62 per cent. of cures. Owing to the resulting shortening, the author would be glad to discard resection of the hip; but, seeing that injections of iodoform are particularly useless in this joint, there remains nothing else. He has succeeded, however, in several cases, in removing the capsule and leaving the head of the bone in place. This is best done by means of a transverse incision. After 40 years of age, and even earlier, exarticulation is recommended.

In 51 cases of resection of the knee with extirpation of the capsule, 88 per cent. of cures resulted. As with the hip-joint, Riedel regards the fortieth year as the limit of time in which resections should be made.

In 14 resections of the ankle there were 78 per cent. of recoveries. It is best to operate as soon as the diagnosis is made. Riedel prefers König's method.

In 16 resections of the shoulder, 12 were cured.

In 4 resections of the wrist, 3 were cured. As in the ankle, an operation should be made as soon as the diagnosis of tuberculosis is established, without reference to the age of the patient.

Riedel recommends iodoform injections in abscesses appearing above Poupart's ligament which result from caries of the vertebra; also, in hydrops tuberculosis, and in old persons where it is advisable to temporize. He speaks against the employment of injections in younger individuals.

It is best to operate before the fistulæ appear, because infection with pus cocci is apt to cause such intimate adhesions between the surrounding tissues and the tubercular disease that it is at times impossible to effectually remove the latter. A reason for operating early in the disease is that delay exposes the patient to the danger of the

development of tubercular processes in other portions of the body.

Sahli, of Langenthal (*Corres. f. sch. Aerzte*, March 15, 1893), writes on the use of iodoform injections in tubercular diseases of bones and joints. The best of all preparations is that employed by Tübingen in which sterilized olive-oil is thoroughly impregnated, by prolonged shaking, with 10 per cent. of iodoform; 4 per cent. dissolves and 6 per cent. remains in suspension. The mixture will readily pass through a reasonably small needle, and an ordinary hypodermatic syringe may be used. It is well to partially withdraw the needle and re-insert it, so as to deposit the iodoform in several different foci. There is little doubt that the effectiveness of the treatment lies in the liberation of small quantities of free iodine by the gradual action of the fluids of the body. Sahli, contrary to the advice of Bohny, often injects as much as 2 grammes of iodoform-oil at a time, and has never produced symptoms of intoxication. Pain or inflammation hardly ever follows, and cold compresses, etc., are unnecessary.

During four or five weeks the injections should be made twice a week; and then, for the same length of time, once every one or two weeks. The patient should then be carefully watched for some time. In severe cases the treatment must be continued much longer, and the individual should not be lost sight of for at least six to twelve months. Improvement should begin after four or five injections, but care must be taken not to stop the treatment too soon.

Sahli would recommend the treatment of all cases of tubercular disease of bones and joints by iodoform injections, with the exception of those presenting large abscesses, extended destruction of bone, and multiple fistulæ, which are better suited for amputation. If nothing is accomplished, at least no harm will be done. The process is especially adapted to the after-treatment of cases which have been curetted. The elbow- and the hip-joint respond best and most quickly.

Sahli combines with the injections the creasote treatment, local massage, extension, etc., where indicated. He lays much stress upon strict asepsis in connection with the iodoform injections.—*Centralblatt für Chirurgie*, February 18, 1893.

Operations in the Vertebral Canal.

Urban defines the indications for operations in the vertebral canal as follows: 1st. Vertebral fractures with pressure upon the spinal cord. The operation is not to be undertaken immediately after the injury, but should be postponed until the beginning of consolidation, as it would be extremely difficult in the beginning to firmly set together the broken parts. The proper time, varying with circumstances, would be from the fifth to the eighth day, if by that time the symptoms are not on the mend; if after the twelfth week there should be no improvement, the operation should undoubtedly be

performed. 2d. New formations in the vertebral canal. 3d. Spondylitis tuberculosa, after the process has remained stationary during at least several months, and no abscesses are suspected. 4th. As an exploration measure in all cases in which symptoms of localized pressure on the spinal cord are shown, after which, according to what is disclosed, the operation may be completed.—*Verhandlungen der Deutschen Gesellschaft für Chirurgie*, Bd. xxi.

A New Method of Cutting Œsophageal Stricture.

Abbe describes a new method of dividing cicatricial stricture of the œsophagus, which he practiced with very good results on a patient aged 30. After the performance of gastrostomy, a digital examination is made of the lower œsophageal orifice, and a small conical gum-elastic bougie is guided into the canal by the finger. A string of heavy-braided ligature silk is carried from the stomach to the mouth by passing a very small bougie through the œsophageal stricture. In the case reported by the author, the upper end of the string was brought out by the neck through a wound which had been made in an unsuccessful attempt at external division of the stricture. A larger bougie is now passed from the stomach alongside the string, and pressed tightly into the stricture so as to stretch it. The string is now drawn upward by the fingers, passed to the back of the patient's mouth, and the bougie will be felt to advance at once as the string makes its way into the tense stricture. Larger bougies are now passed, and the string is "see-sawed" upwards and downwards. When the largest size has been passed, a rubber tube of corresponding size is drawn through the œsophagus past the point of stricture, its lower end remaining outside the wound in the stomach. A smaller tube is passed into the stomach for nourishment. The patient can thus drink water for refreshing the mouth, and swallow saliva without contaminating the wounded surface, which the tube also serves to keep dilated. The large tube may be removed on the second or third day, and dilating bougies be introduced by the mouth after the fourth day. Finally the gastrostomy wound may be closed, whenever the patient has gained strength, by a plastic operation.—*Medical Record*.

OBSTETRICS.

Gonorrhœa and the Puerperium.

Kronig (*Centralbl. f. Gynak.*, No. 8, 1893) has studied the development of gonococci in nine women after labor. The germs are easily found in the lochia. It is certain that in women with vaginal gonorrhœa the disease may extend into the uterus during the puerperium. Gonorrhœal infection of the uterine cavity may also set up fever even when there is no trace of mixed infection, no other germs being present. Gonorrhœal infection in the puerperium is not of direct

danger to life, but frequently leads to complications late in the puerperium, the disease progressing from the endometrium to the tubes. Two cases of this kind were recorded. The first, after the usual careful routine treatment, left the hospital on the fourteenth day. Two weeks later she returned. A perimetritic exudation was detected to the left of the cervix. The second case was graver. On the fourteenth day the temperature rose to over 103°, the right elbow became painful, and effusion into the extensor tendons of the right hand occurred. During the third week right parametritis set in, the temperature rising to 104°. Then the pain and parametric swelling subsided. The fluid from the tenosynovitis was sero-purulent but free from germs.

Unconscious Delivery.

Le Blond (*Jour. de Med. de Paris*, July 30th, 1893) related in July a remarkable case before the Medico-legal Society of Paris. A woman, aged 27, who had been seduced and deserted, was seized with slight colicky pain, but continued to work. In the course of the following night she was attacked with still more severe pain. Thinking that an action of the bowels would give relief, she sat upon her chamber utensil; on straining a live child was born. This alarmed her greatly, but she cut the cord with scissors, wrapped the infant in a cloth and walked downstairs, telling the people in the house, in fear and trembling, what had happened. Violent flooding set in. The cord had not been tied. Early in the morning Le Blond saw the patient, and found the placenta still in the vagina. He extracted it. The mother and child did very well. Had the child died the mother would have been very strongly suspected of murder, especially if she had attempted to defecate in a public privy, in which case the child would almost inevitably have been killed.—*Br. Med. Jour.*

Fœtal Peritonitis Severing the Intestinal Canal.

Mackenrodt and Keller (*Centralbl. f. Gynak.*, No. 28, 1893) read, at a recent meeting of the Berlin Obstetrical Society, cases of death of infants, one week old, from intestinal obstruction. In Mackenrodt's cases, the infant died at the end of a week, after vomiting feces for two days. The abdominal cavity showed all the signs of chronic peritonitis, free adhesion of intestine, indurated patches, etc. The peritoneal cavity was full of yellow feces which had escaped through a larger perforation, with sloughy edges, in the small intestine. A circular band of dense inflammatory deposit completely surrounded and obstructed the small intestine in the middle of its course, and had broken the continuity of the intestine through atrophy. The proximal side of the alimentary canal was greatly dilated. The lumen of the severed distal part was very small, nor could the ileum be distinguished from the colon. The mother had borne five healthy children, and showed no signs of

sypilis. Keller's patient was a male infant; it vomited all its milk in whatever way administered. It died at the beginning of the second week. The appearances were as in Mackenrodt's case, excepting that there was no perforation, and that the closed severed ends of the small intestine were smooth. He believed that the peritonitis was the primary disease in both cases. It had hindered the development of the intestine. Olshausen disagreed with this theory, believing that the malformation of the intestine was the cause of the peritonitis.—*Br. Med. Jour.*

GYNECOLOGY.

Spontaneous Amputation of an Inverted Uterus.

Huston (*Archives of Gynec.*) relates a case in which the patient was a mulatto aged about 35. She had aborted several times and never carried a child to term. A negro midwife attended her and delivered the child and placenta "naturally," after the custom in South Carolina, the patient being placed in a kneeling position before a chair, whilst uterine contractions were stimulated by shaking her up and down. When the patient got up to go to stool the uterus came down. She lay for three days longer on a filthy mattress in hot weather. Huston was then called in. She was in an unconscious condition, the abdomen being enormously distended, while a putrid pulpy mass protruded from the vagina. It was the inverted uterus which had virtually amputated itself by the contraction of the cervix upon the ligaments and tubes. The sloughy organ was removed and the vagina plugged with gauze smeared with carbolyzed vaseline. The patient, who at the time seemed to be dying, made a good recovery.

Conservative Operation on the Ovaries, Tubes and Uterus.

A. Martin (*Deut. Med. Woch.*, 1893) draws attention to the importance of this subject. (1) Resection of the ovary. Ovarian disease is very frequently bilateral, but sometimes circumscribed cystic disease may be found in other ovary. The question arises as to whether the whole organ should then be removed. It certainly should be if there is no healthy ovarian tissue left or the process be a suppurative one, but in some other cases it may not be necessary to remove it. The author refers to 27 such cases with one death; two of these relapsed, and of the 24 remaining ones eight bore children. Ignipuncture has been employed, but the author is satisfied with incision and stitching up. (2) Resection of a stenosed tube, the other being removed for disease. Here it may be more difficult to recognize the character of the disease. The contents of the tube must be most carefully looked to. If the contents be turbid or unmistakably purulent or if the

mucous membrane be ulcerated, the tube must be removed; otherwise resection with the formation of a new ostium may be practiced. If any doubt exists, the whole appendage must be taken away. Of 40 cases, with two deaths, only four were not cured or considerably improved. Only one became pregnant, but 12 were unmarried, and the husbands of some others were neurasthenical or had had gonorrhoea. (3) Enucleation of myomata. The older the patients the more likely are myomata to be multiple. In 141 cases of intraparietal myomata, 26 died but this includes the period of development of the technique of laparotomy; of the last 20, only one died. Of the 115, only four relapsed (three per cent). The author has not found any difficulty in stitching up the bed of the tumor, nor has any unpleasant hemorrhage occurred. Only two of these patients became pregnant, but other causes of sterility may exist. The author concludes (1) that the conservative operations do not present any materially greater risk than radical ones; (2) that women are thus relieved of their troubles in by far the greater majority of cases; (3) that relapses are exceptional; (4) that the female functions persist; (5) that child-bearing is possible; and (6) that child-birth then takes place without any special risk.—*Br. Med. Jour.*

NEWS AND MISCELLANY.

Board of Health Resign.

Four or six members of the Columbus, Georgia, Board of Health including the President, Dr. Ticknor, resigned because the city council refused to pass the ordinance of quarantine against Brunswick.—*Jour. Amer. Med. Ass.*

The Holy (Cholera) Well at Mecca.

Mr. E. Frankland, writing to the London *Times*, on the condition of the water of the holy well of Zem-Zem, used by the Mahometan pilgrims at Mecca, says: A sample of the water came to me through the India Office. It was full of dead microbes and contained, in an equal volume, considerable more animal matter than is found in average London sewage. In addition, it afforded evidence of previous pollution with an amount of such matter at least six times as great as that contained in an equal volume of average London sewage. The water has been again, quite recently, analyzed by Colonel Bonkowski Bey, consulting chemist to his Majesty the Sultan of Turkey. His results confirm my own analysis. They show that the water is still abominably polluted by excrementitious matters. The surroundings of this well are such as would be likely to impart to the water these dangerous ingredients. Mecca appears to have no sewerage system; all foul matters being buried in the earth within or near the city. Hence the

foulness of the water percolating into the well through this mass of corruption. Colonel Bonkowski Bey informs me that Mecca is supplied with water of excellent quality, but, of course, the pilgrims are bound to drink at the holy well. Tens of thousands of pilgrims continue to die of cholera at Mecca and to spread the disease elsewhere; but, so far as I know, no measures have been taken to prevent pollution, and Mecca continues to be a cholera center.

ARMY AND NAVY.

U. S. ARMY FROM SEPTEMBER 17, 1893, TO SEPTEMBER 23, 1892.

1st Lieut. Charles F. Kieffer, is relieved from further duty at Fort Meade, S. P., and from temporary duty at Fort Yellowstone, Wyo., and will report to commanding officer at Fort Assiniboine, Montana, for duty.

1st Lieutenant William F. Lewis, Assistant Surgeon, will upon being relieved from duty at Fort Assiniboine, Montana, by Lieut. Kieffer, report to commanding officer Fort Apache, Arizona, for duty.

1st Lieut. Benjamin Brooke, Assistant Surgeon, will proceed at once from Fort Leavenworth, Kansas, to Fort Brady, Michigan for temporary duty during the absence on leave of Assistant Surgeon Paul Clendenin, U. S. Army.

Leave of absence for one month, to take effect upon the arrival of Assistant Surgeon Benjamin Brooke, is granted Captain Paul Clendum, Assistant Surgeon U. S. Army.

Captain Curtis E. Price, Assistant Surgeon, relieved from duty at Fort Wadsworth, N. Y. and ordered to report to the commanding officer, Fort Ponter, N. Y. for temporary duty at that post.

Captain Wm. C. Shannon, Assistant Surgeon, is relieved from duty in the office of the Surgeon General of the Army, and as assistant to the attending in Washington, and will proceed to N. Y. City and report in person to the Commanding General Department of the East for duty as attending surgeon and examiner of recruits in that city, relieving Captain Guy S. Edie, Assistant Surgeon.

Captain H. S. T. Harvis, Assistant Surgeon U. S. Army, is relieved from duty at Fort Kioh, Montana and assigned to duty at Fort Preble, Maine.

Captain M. W. Wood, Assistant Surgeon U. S. Army, is relieved from duty at Fort Preble, Maine, and assigned to duty in Boston, Mass. as attending surgeon and examiner of recruits.

Captain Francis J. Ives, Assistant Surgeon ordered to proceed from Fort Sheridan, Ills.

to Chicago, Ills. and report to Captain Louis A. La Garde, Assistant Surgeon, in charge of the medical section of the War Department exhibit World's Columbian Exposition, for temporary duty.

Captain Guy L. Edie, Assistant Surgeon, upon being relieved from duty in N. Y. City, by Captain William C. Shannon, Assistant Surgeon, proceed to Washington D. C. and report in person to the attending surgeon for duty in his office.

Captain Wm. G. Spencer, Assistant Surgeon is granted six (6) months extension to sick leave of absence granted, in Special Orders, No. 108 A. G. O. May, 13, 1893.

Captain Louis Buechemin, Assistant Surgeon, is granted twenty-three days leave, to take effect about September 17, 1893.

Major Aenry McEldervy, Surgeon U. S. Army, is granted leave of absence for one month to take effect about October 1, 1893.

Lieut. Champe C. McCulloch, Jr. Assistant, Surgeon, is relieved from duty at Fort Sam, Houston, Texas, and ordered to Fort Ringgold, Texas, for duty relieving Capt. James E. Pitcher, Assistant Surgeon. Captain Pitcher, upon being relieved, ordered to Fort Niagara, N. Y., for duty relieving Captain Reuben L. Robertson, Assist. Surgeon Capt. Robertson, upon being relieved, ordered to Fort Omaha, Nebraska, for duty.

Leave of absence for one month, to take effect on or about October 1, 1893, is hereby granted Lieutenant Colonel J. V. D. Middleton, Deputy Surgeon General U. S. Army, with permission to apply for an extension of fifteen days.

Captain Lewis A. L. Garde, Assistant Surgeon, will at the completion of his duties in connection with the World's Columbian Exposition, report in person to the commanding general Dept. of the Colorado, Denver, Colorado, for duty as Attending Surgeon and Examiner of recruits in that city.

1st Lieutenant Harry R. Stiles, Assistant Surgeon, is relieved from duty at Fort Omaha, Nebraska, and will report in person to the commanding officer, Fort Meade, South Dakota, for duty at that post.

By direction of the Secretary of War, the leave of absence granted Captain Charles E. Woodruff, Assistant Surgeon, is extended four months.

The leave of absence granted Captain Junius L. Powell, Assistant Surgeon, is extended ten days.

Leave of absence for one month is hereby granted to Major J. Van R. Hoff, Surgeon U. S. Army.

Leave of absence for one month, to take effect about the 5th instant, is granted Col. J. C. Bailly, Asst. Surgeon General.

Leave of absence for one month, to take effect between the 25th instant, and the 5th proximo, is granted Major Charles L. Helmann, Surgeon, Fort Douglas, Utah.